

SEQUENCE LISTING

<110> Yaffe, Michael B.
 Elia, Andrew E. H.
 Rellos, Peter
 Cantley, Lewis C.
 Smerdon, Stephen J.
 Mancke, Isaac

<120> Binding Compounds Targeting the
 Non-Kinase Domain Segment of Polo-Like Kinases

<130> 01997/545003

<150> US 60/487,899

<151> 2003-07-17

<150> US 60/485,641

<151> 2003-07-08

<150> US 60/426,132

<151> 2002-11-14

<160> 95

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 603

<212> PRT

<213> Homo sapiens

<400> 1

Met	Ser	Ala	Ala	Val	Thr	Ala	Gly	Lys	Leu	Ala	Arg	Ala	Pro	Ala	Asp	1	5	10	15
Pro	Gly	Lys	Ala	Gly	Val	Pro	Gly	Val	Ala	Ala	Pro	Gly	Ala	Pro	Ala	20	25	30	
Ala	Ala	Pro	Pro	Ala	Lys	Glu	Ile	Pro	Glu	Val	Leu	Val	Asp	Pro	Arg	35	40	45	
Ser	Arg	Arg	Arg	Tyr	Val	Arg	Gly	Arg	Phe	Leu	Gly	Lys	Gly	Gly	Phe	50	55	60	
Ala	Lys	Cys	Phe	Glu	Ile	Ser	Asp	Ala	Asp	Thr	Lys	Glu	Val	Phe	Ala	65	70	75	80
Gly	Lys	Ile	Val	Pro	Lys	Ser	Leu	Leu	Leu	Lys	Pro	His	Gln	Arg	Glu	85	90	95	
Lys	Met	Ser	Met	Glu	Ile	Ser	Ile	His	Arg	Ser	Leu	Ala	His	Gln	His	100	105	110	
Val	Val	Gly	Phe	His	Gly	Phe	Phe	Glu	Asp	Asn	Asp	Phe	Val	Phe	Val	115	120	125	
Val	Leu	Glu	Leu	Cys	Arg	Arg	Arg	Ser	Leu	Leu	Glu	Leu	His	Lys	Arg	130	135	140	
Arg	Lys	Ala	Leu	Thr	Glu	Pro	Glu	Ala	Arg	Tyr	Tyr	Leu	Arg	Gln	Ile	145	150	155	160
Val	Leu	Gly	Cys	Gln	Tyr	Leu	His	Arg	Asn	Arg	Val	Ile	His	Arg	Asp	165	170	175	
Leu	Lys	Leu	Gly	Asn	Leu	Phe	Leu	Asn	Glu	Asp	Leu	Glu	Val	Lys	Ile	180	185	190	

Gly	Asp	Phe	Gly	Leu	Ala	Thr	Lys	Val	Glu	Tyr	Asp	Gly	Glu	Arg	Lys	
		195					200					205				
Lys	Thr	Leu	Cys	Gly	Thr	Pro	Asn	Tyr	Ile	Ala	Pro	Glu	Val	Leu	Ser	
	210					215					220					
Lys	Lys	Gly	His	Ser	Phe	Glu	Val	Asp	Val	Trp	Ser	Ile	Gly	Cys	Ile	
225					230					235					240	
Met	Tyr	Thr	Leu	Leu	Val	Gly	Lys	Pro	Pro	Phe	Glu	Thr	Ser	Cys	Leu	
			245						250					255		
Lys	Glu	Thr	Tyr	Leu	Arg	Ile	Lys	Lys	Asn	Glu	Tyr	Ser	Ile	Pro	Lys	
		260					265						270			
His	Ile	Asn	Pro	Val	Ala	Ala	Ser	Leu	Ile	Gln	Lys	Met	Leu	Gln	Thr	
	275						280					285				
Asp	Pro	Thr	Ala	Arg	Pro	Thr	Ile	Asn	Glu	Leu	Leu	Asn	Asp	Glu	Phe	
	290					295					300					
Phe	Thr	Ser	Gly	Tyr	Ile	Pro	Ala	Arg	Leu	Pro	Ile	Thr	Cys	Leu	Thr	
305					310					315					320	
Ile	Pro	Pro	Arg	Phe	Ser	Ile	Ala	Pro	Ser	Ser	Leu	Asp	Pro	Ser	Asn	
			325						330					335		
Arg	Lys	Pro	Leu	Thr	Val	Leu	Asn	Lys	Gly	Leu	Glu	Asn	Pro	Leu	Pro	
		340					345						350			
Glu	Arg	Pro	Arg	Glu	Lys	Glu	Glu	Pro	Val	Val	Arg	Glu	Thr	Gly	Glu	
	355					360						365				
Val	Val	Asp	Cys	His	Leu	Ser	Asp	Met	Leu	Gln	Gln	Leu	His	Ser	Val	
	370					375				380						
Asn	Ala	Ser	Lys	Pro	Ser	Glu	Arg	Gly	Leu	Val	Arg	Gln	Glu	Glu	Ala	
385					390				395						400	
Glu	Asp	Pro	Ala	Cys	Ile	Pro	Ile	Phe	Trp	Val	Ser	Lys	Trp	Val	Asp	
			405					410					415			
Tyr	Ser	Asp	Lys	Tyr	Gly	Leu	Gly	Tyr	Gln	Leu	Cys	Asp	Asn	Ser	Val	
		420					425						430			
Gly	Val	Leu	Phe	Asn	Asp	Ser	Thr	Arg	Leu	Ile	Leu	Tyr	Asn	Asp	Gly	
	435					440						445				
Asp	Ser	Leu	Gln	Tyr	Ile	Glu	Arg	Asp	Gly	Thr	Glu	Ser	Tyr	Leu	Thr	
	450					455					460					
Val	Ser	Ser	His	Pro	Asn	Ser	Leu	Met	Lys	Lys	Ile	Thr	Leu	Leu	Lys	
465					470					475					480	
Tyr	Phe	Arg	Asn	Tyr	Met	Ser	Glu	His	Leu	Leu	Lys	Ala	Gly	Ala	Asn	
			485					490						495		
Ile	Thr	Pro	Arg	Glu	Gly	Asp	Glu	Leu	Ala	Arg	Leu	Pro	Tyr	Leu	Arg	
		500					505						510			
Thr	Trp	Phe	Arg	Thr	Arg	Ser	Ala	Ile	Ile	Leu	His	Leu	Ser	Asn	Gly	
	515						520					525				
Ser	Val	Gln	Ile	Asn	Phe	Phe	Gln	Asp	His	Thr	Lys	Leu	Ile	Leu	Cys	
	530					535					540					
Pro	Leu	Met	Ala	Ala	Val	Thr	Tyr	Ile	Asp	Glu	Lys	Arg	Asp	Phe	Arg	
545					550					555					560	
Thr	Tyr	Arg	Leu	Ser	Leu	Leu	Glu	Glu	Tyr	Gly	Cys	Cys	Lys	Glu	Leu	
			565					570						575		
Ala	Ser	Arg	Leu	Arg	Tyr	Ala	Arg	Thr	Met	Val	Asp	Lys	Leu	Leu	Ser	
			580					585					590			
Ser	Arg	Ser	Ala	Ser	Asn	Arg	Leu	Lys	Ala	Ser						
	595						600									

<210> 2

<211> 7

<212> PRT

<213> Homo sapiens

<220>
 <221> VARIANT
 <222> 1
 <223> Xaa = Pro or Phe

 <221> VARIANT
 <222> 2
 <223> Xaa = Pro or any Hydrophobic acid

 <221> VARIANT
 <222> 3
 <223> Xaa = Ala, Gln or any hydrophobic amino acid

 <221> VARIANT
 <222> 4
 <223> Xaa = Thr, Gln, His or Met

 <221> VARIANT
 <222> 6
 <223> Xaa = phosphorylated Thr or phosphorylated Ser

 <221> VARIANT
 <222> 7
 <223> Xaa = Pro or any amino acid

 <400> 2
 Xaa Xaa Xaa Xaa Ser Xaa Xaa
 1 5

 <210> 3
 <211> 15
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> MOD_RES
 <222> 8
 <223> Threonine at position 8 is phosphorylated
 Threonine

 <400> 3
 Met Ala Gly Pro Met Gln Ser Thr Pro Leu Asn Gly Ala Lys Lys
 1 5 10 15

 <210> 4
 <211> 685
 <212> PRT
 <213> Homo sapiens

 <400> 4
 Met Glu Leu Leu Arg Thr Ile Thr Tyr Gln Pro Ala Ala Ser Thr Lys
 1 5 10 15
 Met Cys Glu Gln Ala Leu Gly Lys Gly Cys Gly Gly Asp Ser Lys Lys
 20 25 30
 Lys Arg Pro Pro Gln Pro Pro Glu Ser Gln Pro Pro Gln Ser Gln
 35 40 45
 Ala Gln Val Pro Pro Ala Ala Pro His His His His His Ser His

Phe	Asn	Asn	Gly	Ala	His	Met	Ser	Leu	Leu	Pro	Asp	Lys	Lys	Thr	Val
	530					535					540				
His	Tyr	Tyr	Ala	Glu	Leu	Gly	Gln	Cys	Ser	Val	Phe	Pro	Ala	Thr	Asp
545					550					555					560
Ala	Pro	Glu	Gln	Phe	Ile	Ser	Gln	Val	Thr	Val	Leu	Lys	Tyr	Phe	Ser
				565						570					575
His	Tyr	Met	Glu	Asn	Leu	Met	Asp	Gly	Gly	Asp	Leu	Pro	Ser	Val	
			580				585					590			
Thr	Asp	Ile	Arg	Arg	Pro	Arg	Leu	Tyr	Leu	Leu	Gln	Trp	Leu	Lys	Ser
		595					600					605			
Asp	Lys	Ala	Leu	Met	Met	Leu	Phe	Asn	Asp	Gly	Thr	Phe	Gln	Val	Asn
	610					615					620				
Phe	Tyr	His	Asp	His	Thr	Lys	Ile	Ile	Ile	Cys	Ser	Gln	Asn	Glu	Glu
625					630					635					640
Tyr	Leu	Leu	Thr	Tyr	Ile	Asn	Glu	Asp	Arg	Ile	Ser	Thr	Thr	Phe	Arg
				645					650						655
Leu	Thr	Thr	Leu	Leu	Met	Ser	Gly	Cys	Ser	Ser	Glu	Leu	Lys	Asn	Arg
			660					665					670		
Met	Glu	Tyr	Ala	Leu	Asn	Met	Leu	Leu	Gln	Arg	Cys	Asn			
		675					680					685			

<210> 5
 <211> 607
 <212> PRT
 <213> Homo sapiens

<400> 5															
Met	Leu	Ala	Gly	Leu	Pro	Thr	Ser	Asp	Pro	Gly	Arg	Leu	Ile	Thr	Asp
1				5					10					15	
Pro	Arg	Ser	Gly	Arg	Thr	Tyr	Leu	Lys	Gly	Arg	Leu	Leu	Gly	Lys	Gly
			20					25					30		
Gly	Phe	Ala	Arg	Cys	Tyr	Glu	Ala	Thr	Asp	Thr	Glu	Thr	Gly	Ser	Ala
		35					40					45			
Tyr	Ala	Val	Lys	Val	Ile	Pro	Gln	Ser	Arg	Val	Ala	Lys	Pro	His	Gln
	50				55					60					
Arg	Glu	Lys	Ile	Leu	Asn	Glu	Ile	Glu	Leu	His	Arg	Asp	Leu	Gln	His
65					70					75					80
Arg	His	Ile	Val	Arg	Phe	Ser	His	His	Phe	Glu	Asp	Ala	Asp	Asn	Ile
				85					90					95	
Tyr	Ile	Phe	Leu	Glu	Leu	Cys	Ser	Arg	Lys	Ser	Leu	Ala	His	Ile	Trp
			100					105					110		
Lys	Ala	Arg	His	Thr	Leu	Leu	Glu	Pro	Glu	Val	Arg	Tyr	Tyr	Leu	Arg
		115					120					125			
Gln	Ile	Leu	Ser	Gly	Leu	Lys	Tyr	Leu	His	Gln	Arg	Gly	Ile	Leu	His
	130					135					140				
Arg	Asp	Leu	Lys	Leu	Gly	Asn	Phe	Phe	Ile	Thr	Glu	Asn	Met	Glu	Leu
145					150					155					160
Lys	Val	Gly	Asp	Phe	Gly	Leu	Ala	Ala	Arg	Leu	Glu	Pro	Pro	Glu	Gln
				165					170					175	
Arg	Lys	Lys	Thr	Ile	Cys	Gly	Thr	Pro	Asn	Tyr	Val	Ala	Pro	Glu	Val
			180					185					190		
Leu	Leu	Arg	Gln	Gly	His	Gly	Pro	Glu	Ala	Asp	Val	Trp	Ser	Leu	Gly
		195					200					205			
Cys	Val	Met	Tyr	Thr	Leu	Leu	Cys	Gly	Ser	Pro	Pro	Phe	Glu	Thr	Ala
	210					215					220				
Asp	Leu	Lys	Glu	Thr	Tyr	Arg	Cys	Ile	Lys	Gln	Val	His	Tyr	Thr	Leu
225					230					235					240
Pro	Ala	Ser	Leu	Ser	Leu	Pro	Ala	Arg	Gln	Leu	Leu	Ala	Ala	Ile	Leu

<223> Xaa = Pro or any hydrophobic acid
 <221> VARIANT
 <222> 3
 <223> Xaa = Ala, Gln or any hydrophobic acid
 <221> VARIANT
 <222> 4
 <223> Xaa = Thr, Gln, His or Met
 <221> VARIANT
 <222> 6
 <223> Xaa = phosphorylated Thr or phosphorylated Ser
 <221> VARIANT
 <222> 7
 <223> Xaa = Pro or any amino acid
 <400> 6
 Xaa Xaa Xaa Xaa Ser Xaa Xaa
 1 5
 <210> 7
 <211> 7
 <212> PRT
 <213> Homo sapiens
 <220>
 <221> PHOSPHORYLATION
 <222> 5
 <223> Thr at position 5 is phosphorylated
 <400> 7
 Pro Met Gln Ser Thr Pro Leu
 1 5
 <210> 8
 <211> 4
 <212> PRT
 <213> Homo sapiens
 <220>
 <221> VARIANT
 <222> 1
 <223> Xaa = Met, Tyr, Phe, Ile, Leu, His, or Lys.
 <221> VARIANT
 <222> 2
 <223> Xaa = Ala, His, Met, Thr, Phe, or Gln.
 <221> VARIANT
 <222> 3
 <223> Xaa = Ser, Ala, Gly, or Thr.
 <221> VARIANT
 <222> 4
 <223> Xaa = Phosphorylated Serine or Threonine

<400> 8
Xaa Xaa Xaa Xaa
1

<210> 9
<211> 7
<212> PRT
<213> Homo sapiens

<220>
<221> VARIANT
<222> 1
<223> Xaa = Any Amino Acid

<221> VARIANT
<222> 2
<223> Xaa = Met, Tyr, Phe, Ile, Leu, His, or Lys.

<221> VARIANT
<222> 3
<223> Xaa = Ala, His, Met, Thr, Phe, or Gln.

<221> VARIANT
<222> 4
<223> Xaa = Ser, Ala, Gly, or Thr.

<221> VARIANT
<222> 5
<223> Xaa = phosphorylated Ser or phosphorylated Thr.

<221> VARIANT
<222> 6
<223> Xaa = Pro, Met, or Asn.

<221> VARIANT
<222> (7)...(7)
<223> Xaa = any amino acid

<400> 9
Xaa Xaa Xaa Xaa Xaa Xaa Xaa
1 5

<210> 10
<211> 6
<212> PRT
<213> Homo sapiens

<220>
<221> VARIANT
<222> 4
<223> Xaa = pThr or pSer

<400> 10
Met Gln Ser Xaa Pro Leu
1 5

<210> 11
 <211> 15
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> VARIANT
 <222> 3, 4, 5, 6, 9, 10, 11, 12
 <223> Xaa = Any Amino Acid

 <221> PHOSPHORYLATION
 <222> 7
 <223> Thr at position 7 is phosphorylated

 <400> 11
 Met Ala Xaa Xaa Xaa Xaa Thr Pro Xaa Xaa Xaa Xaa Ala Lys Lys
 1 5 10 15

 <210> 12
 <211> 15
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> VARIANT
 <222> 3, 4, 5, 6, 9, 10, 11, 12
 <223> Xaa = Any Amino Acid

 <221> PHOSPHORYLATION
 <222> 7
 <223> Ser at position 7 is phosphorylated

 <400> 12
 Met Ala Xaa Xaa Xaa Xaa Ser Pro Xaa Xaa Xaa Xaa Ala Lys Lys
 1 5 10 15

 <210> 13
 <211> 15
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> VARIANT
 <222> 3, 4, 5, 6, 9, 10, 11, 12
 <223> Xaa = Any Amino Acid

 <221> PHOSPHORYLATION
 <222> 8
 <223> Thr at position 8 is phosphorylated

 <400> 13
 Met Ala Xaa Xaa Xaa Xaa Ser Thr Xaa Xaa Xaa Xaa Ala Lys Lys
 1 5 10 15

 <210> 14
 <211> 15

<212> PRT
<213> Homo sapiens

<220>
<221> VARIANT
<222> 3, 4, 5, 6, 9, 10, 11, 12
<223> Xaa = Any Amino Acid

<221> PHOSPHORYLATION
<222> 8
<223> Ser at position 8 is phosphorylated

<400> 14
Met Ala Xaa Xaa Xaa Xaa Ser Ser Xaa Xaa Xaa Xaa Ala Lys Lys
1 5 10 15

<210> 15
<211> 20
<212> PRT
<213> Homo sapiens

<220>
<221> VARIANT
<222> 7, 8, 10, 13, 14, 15, 16
<223> Xaa = Any Amino Acid

<400> 15
Glx Gly Glx Gly Gly Ala Xaa Xaa Asx Xaa Thr Pro Xaa Xaa Xaa Xaa
1 5 10 15
Ala Lys Lys Lys
20

<210> 16
<211> 20
<212> PRT
<213> Homo sapiens

<220>
<221> VARIANT
<222> 7, 8, 10, 13, 14, 15, 16
<223> Xaa = Any Amino Acid

<400> 16
Glx Gly Glx Gly Gly Ala Xaa Xaa Asx Xaa Thr Pro Xaa Xaa Xaa Xaa
1 5 10 15
Ala Lys Lys Lys
20

<210> 17
<211> 20
<212> PRT
<213> Homo sapiens

<220>
<221> VARIANT
<222> 7, 8, 9, 10, 12, 13, 14, 15, 16

<223> Xaa = Any Amino Acid

<221> PHOSPHORYLATION

<222> 11

<223> Thr at position 11 is phosphorylated

<400> 17

Glx	Gly	Glx	Gly	Gly	Ala	Xaa	Xaa	Xaa	Xaa	Thr	Xaa	Xaa	Xaa	Xaa	Xaa
1				5					10					15	
Ala	Lys	Lys	Lys												
			20												

<210> 18

<211> 20

<212> PRT

<213> Homo sapiens

<220>

<221> VARIANT

<222> 7, 8, 9, 10, 12, 13, 14, 15, 16

<223> Xaa = Any Amino Acid

<400> 18

Glx	Gly	Glx	Gly	Gly	Ala	Xaa	Xaa	Xaa	Xaa	Thr	Xaa	Xaa	Xaa	Xaa	Xaa
1				5					10					15	
Ala	Lys	Lys	Lys												
			20												

<210> 19

<211> 15

<212> PRT

<213> Homo sapiens

<220>

<221> PHOSPHORYLATION

<222> 8

<223> Thr at position 8 is phosphorylated

<400> 19

Met	Ala	Gly	Pro	Met	Gln	Ser	Thr	Pro	Leu	Asn	Gly	Ala	Lys	Lys
1				5					10					15

<210> 20

<211> 15

<212> PRT

<213> Homo sapiens

<400> 20

Met	Ala	Gly	Pro	Met	Gln	Ser	Thr	Pro	Leu	Asn	Gly	Ala	Lys	Lys
1				5					10					15

<210> 21

<211> 20

<212> PRT

<213> Homo sapiens

<220>
 <221> VARIANT
 <222> 7, 8, 10, 13, 14, 15, 16
 <223> Xaa = Any Amino Acid other than Cys

 <221> MOD_RES
 <222> 1
 <223> Glx at position 1 is biotinylated

 <221> PHOSPHORYLATION
 <222> 11
 <223> Thr at position 11 is phosphorylated

 <400> 21
 Glx Gly Glx Gly Gly Ala Xaa Xaa Asx Xaa Thr Pro Xaa Xaa Xaa Xaa
 1 5 10 15
 Ala Lys Lys Lys
 20

 <210> 22
 <211> 20
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> VARIANT
 <222> 7, 8, 10, 13, 14, 15, 16
 <223> Xaa = Any Amino Acid other than Cys

 <221> MOD_RES
 <222> 1
 <223> Glx at position 1 is biotinylated

 <400> 22
 Glx Gly Glx Gly Gly Ala Xaa Xaa Asx Xaa Thr Pro Xaa Xaa Xaa Xaa
 1 5 10 15
 Ala Lys Lys Lys
 20

 <210> 23
 <211> 19
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> VARIANT
 <222> 7, 8, 9, 11, 13, 14, 15
 <223> Xaa = Any Amino Acid

 <221> MOD_RES
 <222> 1
 <223> Glx at position 1 is biotinylated

 <221> MOD_RES
 <222> 11
 <223> Xaa at position 11 is phosphorylated Serine or
 phosphorylated Threonine

<400> 23
 Glx Gly Glx Gly Gly Ala Xaa Xaa Xaa Asx Xaa Gln Xaa Xaa Xaa Ala
 1 5 10 15
 Lys Lys Lys

<210> 24
 <211> 20
 <212> PRT
 <213> Homo sapiens

<220>
 <221> VARIANT
 <222> 7, 8, 9, 10, 12, 13, 14, 15, 16
 <223> Xaa = Any Amino Acid

<221> MOD_RES
 <222> 11
 <223> Serine at position 11 is phosphorylated

<400> 24
 Glx Gly Glx Gly Gly Ala Xaa Xaa Xaa Xaa Ser Xaa Xaa Xaa Xaa Xaa
 1 5 10 15
 Ala Lys Lys Lys
 20

<210> 25
 <211> 20
 <212> PRT
 <213> Homo sapiens

<220>
 <221> VARIANT
 <222> 7, 8, 9, 10, 12, 13, 14, 15, 16
 <223> Xaa = Any Amino Acid

<221> MOD_RES
 <222> 1
 <223> Glx at position 1 is biotinylated

<221> MOD_RES
 <222> 11
 <223> Threonine at position 11 is phosphorylated

<400> 25
 Glx Gly Glx Gly Gly Ala Xaa Xaa Xaa Xaa Thr Xaa Xaa Xaa Xaa Xaa
 1 5 10 15
 Ala Lys Lys Lys
 20

<210> 26
 <211> 757
 <212> PRT
 <213> Homo sapiens

<400> 26

Met	Ala	Ala	Gly	Gln	Asn	Leu	Gln	Ser	Ser	Glu	Arg	Ser	Glu	Met	Ile
1				5					10					15	
Ala	Thr	Trp	Ser	Pro	Ala	Val	Arg	Thr	Leu	Arg	Asn	Ile	Thr	Asn	Asn
			20					25					30		
Ala	Asp	Ile	Gln	Gln	Met	Asn	Arg	Pro	Ser	Asn	Val	Ala	His	Ile	Leu
		35					40					45			
Gln	Thr	Leu	Ser	Ala	Pro	Thr	Lys	Asn	Leu	Glu	Gln	Gln	Val	Asn	His
	50					55					60				
Ser	Gln	Gln	Gly	His	Thr	Asn	Ala	Asn	Ala	Val	Leu	Phe	Ser	Gln	Val
65				70						75					80
Lys	Val	Thr	Pro	Glu	Thr	His	Met	Leu	Gln	Gln	Gln	Gln	Gln	Ala	Gln
				85					90					95	
Gln	Gln	Gln	Gln	Gln	His	Pro	Val	Leu	His	Leu	Gln	Pro	Gln	Gln	Ile
			100					105					110		
Met	Gln	Leu	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Ile	Ser	Gln	Gln	Pro	Tyr
		115					120					125			
Pro	Gln	Gln	Pro	Pro	His	Pro	Phe	Ser	Gln	Gln	Gln	Gln	Gln	Gln	Gln
	130					135					140				
Gln	Ala	His	Pro	His	Gln	Phe	Ser	Gln	Gln	Gln	Leu	Gln	Phe	Pro	Gln
145					150					155					160
Gln	Gln	Leu	His	Pro	Pro	Gln	Gln	Leu	His	Arg	Pro	Gln	Gln	Gln	Leu
				165					170						175
Gln	Pro	Phe	Gln	Gln	Gln	His	Ala	Leu	Gln	Gln	Gln	Phe	His	Gln	Leu
			180					185					190		
Gln	Gln	His	Gln	Leu	Gln	Gln	Gln	Gln	Leu	Ala	Gln	Leu	Gln	Gln	Gln
		195					200					205			
His	Ser	Leu	Leu	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Ile	Gln	Gln	Gln	Gln
	210					215					220				
Leu	Gln	Arg	Met	His	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Met	Gln	Ser	Gln
225					230					235					240
Thr	Ala	Pro	His	Leu	Ser	Gln	Thr	Ser	Gln	Ala	Leu	Gln	His	Gln	Val
				245					250					255	
Pro	Pro	Gln	Gln	Pro	Pro	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Pro	Pro	Pro
		260					265						270		
Ser	Pro	Gln	Gln	His	Gln	Leu	Phe	Gly	His	Asp	Pro	Ala	Val	Glu	Ile
		275					280					285			
Pro	Glu	Glu	Gly	Phe	Leu	Leu	Gly	Cys	Val	Phe	Ala	Ile	Ala	Asp	Tyr
	290				295						300				
Pro	Glu	Gln	Met	Ser	Asp	Lys	Gln	Leu	Leu	Ala	Thr	Trp	Lys	Arg	Ile
305					310					315					320
Ile	Gln	Ala	His	Gly	Gly	Thr	Val	Asp	Pro	Thr	Phe	Thr	Ser	Arg	Cys
				325					330					335	
Thr	His	Leu	Leu	Cys	Glu	Ser	Gln	Val	Ser	Ser	Ala	Tyr	Ala	Gln	Ala
			340					345					350		
Ile	Arg	Glu	Arg	Lys	Arg	Cys	Val	Thr	Ala	His	Trp	Leu	Asn	Thr	Val
		355					360					365			
Leu	Lys	Lys	Lys	Lys	Met	Val	Pro	Pro	His	Arg	Ala	Leu	His	Phe	Pro
	370					375					380				
Val	Ala	Phe	Pro	Pro	Gly	Gly	Lys	Pro	Cys	Ser	Gln	His	Ile	Ile	Ser
385					390					395					400
Val	Thr	Gly	Phe	Val	Asp	Ser	Asp	Arg	Asp	Asp	Leu	Lys	Leu	Met	Ala
				405					410					415	
Tyr	Leu	Ala	Gly	Ala	Lys	Tyr	Thr	Gly	Tyr	Leu	Cys	Arg	Ser	Asn	Thr
			420					425					430		
Val	Leu	Ile	Cys	Lys	Glu	Pro	Thr	Gly	Leu	Lys	Tyr	Glu	Lys	Ala	Lys
		435					440					445			
Glu	Trp	Arg	Ile	Pro	Cys	Val	Asn	Ala	Gln	Trp	Leu	Gly	Asp	Ile	Leu
	450					455					460				
Leu	Gly	Asn	Phe	Glu	Ala	Leu	Arg	Gln	Ile	Gln	Tyr	Ser	Arg	Tyr	Thr

465					470					475				480
Ala	Phe	Ser	Leu	Gln	Asp	Pro	Phe	Ala	Pro	Thr	Gln	His	Leu	Val
				485					490					495
Asn	Leu	Leu	Asp	Ala	Trp	Arg	Val	Pro	Leu	Lys	Val	Ser	Ala	Glu
			500					505					510	
Leu	Met	Ser	Ile	Arg	Leu	Pro	Pro	Lys	Leu	Lys	Gln	Asn	Glu	Val
		515					520					525		
Asn	Val	Gln	Pro	Ser	Ser	Lys	Arg	Ala	Arg	Ile	Glu	Asp	Val	Pro
	530					535					540			
Pro	Thr	Lys	Lys	Leu	Thr	Pro	Glu	Leu	Thr	Pro	Phe	Val	Leu	Phe
545					550					555				560
Gly	Phe	Glu	Pro	Val	Gln	Val	Gln	Gln	Tyr	Ile	Lys	Lys	Leu	Tyr
				565					570					575
Leu	Gly	Gly	Glu	Val	Ala	Glu	Ser	Ala	Gln	Lys	Cys	Thr	His	Leu
			580					585					590	
Ala	Ser	Lys	Val	Thr	Arg	Thr	Val	Lys	Phe	Leu	Thr	Ala	Ile	Ser
		595					600					605		
Val	Lys	His	Ile	Val	Thr	Pro	Glu	Trp	Leu	Glu	Glu	Cys	Phe	Arg
	610					615					620			
Gln	Lys	Phe	Ile	Asp	Glu	Gln	Asn	Tyr	Ile	Leu	Arg	Asp	Ala	Glu
625					630					635				640
Glu	Val	Leu	Phe	Ser	Phe	Ser	Leu	Glu	Glu	Ser	Leu	Lys	Arg	Ala
			645					650						655
Val	Ser	Pro	Leu	Phe	Lys	Ala	Lys	Tyr	Phe	Tyr	Ile	Thr	Pro	Gly
			660					665					670	
Cys	Pro	Ser	Leu	Ser	Thr	Met	Lys	Ala	Ile	Val	Glu	Cys	Ala	Gly
		675					680					685		
Lys	Val	Leu	Ser	Lys	Gln	Pro	Ser	Phe	Arg	Lys	Leu	Met	Glu	His
	690					695					700			
Gln	Asn	Ser	Ser	Leu	Ser	Glu	Ile	Ile	Leu	Ile	Ser	Cys	Glu	Asn
705					710					715				720
Leu	His	Leu	Cys	Arg	Glu	Tyr	Phe	Ala	Arg	Gly	Ile	Asp	Val	His
			725						730					735
Ala	Glu	Phe	Val	Leu	Thr	Gly	Val	Leu	Thr	Gln	Thr	Leu	Asp	Tyr
			740					745					750	
Ser	Tyr	Lys	Phe	Asn										
		755												

<210> 27
 <211> 1863
 <212> PRT
 <213> Homo sapiens

<400> 27														
Met	Asp	Leu	Ser	Ala	Leu	Arg	Val	Glu	Glu	Val	Gln	Asn	Val	Ile
1				5					10					15
Ala	Met	Gln	Lys	Ile	Leu	Glu	Cys	Pro	Ile	Cys	Leu	Glu	Leu	Ile
			20					25					30	
Glu	Pro	Val	Ser	Thr	Lys	Cys	Asp	His	Ile	Phe	Cys	Lys	Phe	Cys
		35					40					45		
Leu	Lys	Leu	Leu	Asn	Gln	Lys	Lys	Gly	Pro	Ser	Gln	Cys	Pro	Leu
	50					55					60			
Lys	Asn	Asp	Ile	Thr	Lys	Arg	Ser	Leu	Gln	Glu	Ser	Thr	Arg	Phe
65					70					75				80
Gln	Leu	Val	Glu	Glu	Leu	Leu	Lys	Ile	Ile	Cys	Ala	Phe	Gln	Leu
			85						90					95
Thr	Gly	Leu	Glu	Tyr	Ala	Asn	Ser	Tyr	Asn	Phe	Ala	Lys	Lys	Glu
			100					105					110	

Asn	Ser	Pro	Glu	His	Leu	Lys	Asp	Glu	Val	Ser	Ile	Ile	Gln	Ser	Met
		115					120					125			
Gly	Tyr	Arg	Asn	Arg	Ala	Lys	Arg	Leu	Leu	Gln	Ser	Glu	Pro	Glu	Asn
	130					135					140				
Pro	Ser	Leu	Gln	Glu	Thr	Ser	Leu	Ser	Val	Gln	Leu	Ser	Asn	Leu	Gly
145					150					155					160
Thr	Val	Arg	Thr	Leu	Arg	Thr	Lys	Gln	Arg	Ile	Gln	Pro	Gln	Lys	Thr
				165					170					175	
Ser	Val	Tyr	Ile	Glu	Leu	Gly	Ser	Asp	Ser	Ser	Glu	Asp	Thr	Val	Asn
			180					185					190		
Lys	Ala	Thr	Tyr	Cys	Ser	Val	Gly	Asp	Gln	Glu	Leu	Leu	Gln	Ile	Thr
	195						200					205			
Pro	Gln	Gly	Thr	Arg	Asp	Glu	Ile	Ser	Leu	Asp	Ser	Ala	Lys	Lys	Ala
	210					215					220				
Ala	Cys	Glu	Phe	Ser	Glu	Thr	Asp	Val	Thr	Asn	Thr	Glu	His	His	Gln
225					230					235					240
Pro	Ser	Asn	Asn	Asp	Leu	Asn	Thr	Thr	Glu	Lys	Arg	Ala	Ala	Glu	Arg
				245					250					255	
His	Pro	Glu	Lys	Tyr	Gln	Gly	Ser	Ser	Val	Ser	Asn	Leu	His	Val	Glu
			260					265					270		
Pro	Cys	Gly	Thr	Asn	Thr	His	Ala	Ser	Ser	Leu	Gln	His	Glu	Asn	Ser
	275						280					285			
Ser	Leu	Leu	Leu	Thr	Lys	Asp	Arg	Met	Asn	Val	Glu	Lys	Ala	Glu	Phe
	290					295				300					
Cys	Asn	Lys	Ser	Lys	Gln	Pro	Gly	Leu	Ala	Arg	Ser	Gln	His	Asn	Arg
305					310					315					320
Trp	Ala	Gly	Ser	Lys	Glu	Thr	Cys	Asn	Asp	Arg	Arg	Thr	Pro	Ser	Thr
				325					330					335	
Glu	Lys	Lys	Val	Asp	Leu	Asn	Ala	Asp	Pro	Leu	Cys	Glu	Arg	Lys	Glu
			340					345					350		
Trp	Asn	Lys	Gln	Lys	Leu	Pro	Cys	Ser	Glu	Asn	Pro	Arg	Asp	Thr	Glu
	355					360					365				
Asp	Val	Pro	Trp	Ile	Thr	Leu	Asn	Ser	Ser	Ile	Gln	Lys	Val	Asn	Glu
	370					375					380				
Trp	Phe	Ser	Arg	Ser	Asp	Glu	Leu	Leu	Gly	Ser	Asp	Asp	Ser	His	Asp
385					390					395					400
Gly	Glu	Ser	Glu	Ser	Asn	Ala	Lys	Val	Ala	Asp	Val	Leu	Asp	Val	Leu
				405					410					415	
Asn	Glu	Val	Asp	Glu	Tyr	Ser	Gly	Ser	Ser	Glu	Lys	Ile	Asp	Leu	Leu
			420					425					430		
Ala	Ser	Asp	Pro	His	Glu	Ala	Leu	Ile	Cys	Lys	Ser	Glu	Arg	Val	His
	435						440					445			
Ser	Lys	Ser	Val	Glu	Ser	Asn	Ile	Glu	Asp	Lys	Ile	Phe	Gly	Lys	Thr
	450					455					460				
Tyr	Arg	Lys	Lys	Ala	Ser	Leu	Pro	Asn	Leu	Ser	His	Val	Thr	Glu	Asn
465					470					475					480
Leu	Ile	Ile	Gly	Ala	Phe	Val	Thr	Glu	Pro	Gln	Ile	Ile	Gln	Glu	Arg
				485					490					495	
Pro	Leu	Thr	Asn	Lys	Leu	Lys	Arg	Lys	Arg	Arg	Pro	Thr	Ser	Gly	Leu
			500					505					510		
His	Pro	Glu	Asp	Phe	Ile	Lys	Lys	Ala	Asp	Leu	Ala	Val	Gln	Lys	Thr
	515						520					525			
Pro	Glu	Met	Ile	Asn	Gln	Gly	Thr	Asn	Gln	Thr	Glu	Gln	Asn	Gly	Gln
	530					535					540				
Val	Met	Asn	Ile	Thr	Asn	Ser	Gly	His	Glu	Asn	Lys	Thr	Lys	Gly	Asp
545					550					555					560
Ser	Ile	Gln	Asn	Glu	Lys	Asn	Pro	Asn	Pro	Ile	Glu	Ser	Leu	Glu	Lys
				565					570					575	
Glu	Ser	Ala	Phe	Lys	Thr	Lys	Ala	Glu	Pro	Ile	Ser	Ser	Ser	Ile	Ser

Ser Ile Asn Glu Ile Gly Ser Ser Asp Glu Asn Ile Gln Ala Glu Leu
1060 1065 1070
Gly Arg Asn Arg Gly Pro Lys Leu Asn Ala Met Leu Arg Leu Gly Val
1075 1080 1085
Leu Gln Pro Glu Val Tyr Lys Gln Ser Leu Pro Gly Ser Asn Cys Lys
1090 1095 1100
His Pro Glu Ile Lys Lys Gln Glu Tyr Glu Glu Val Val Gln Thr Val
1105 1110 1115 1120
Asn Thr Asp Phe Ser Pro Tyr Leu Ile Ser Asp Asn Leu Glu Gln Pro
1125 1130 1135
Met Gly Ser Ser His Ala Ser Gln Val Cys Ser Glu Thr Pro Asp Asp
1140 1145 1150
Leu Leu Asp Asp Gly Glu Ile Lys Glu Asp Thr Ser Phe Ala Glu Asn
1155 1160 1165
Asp Ile Lys Glu Ser Ser Ala Val Phe Ser Lys Ser Val Gln Lys Gly
1170 1175 1180
Glu Leu Ser Arg Ser Pro Ser Pro Phe Thr His Thr His Leu Ala Gln
1185 1190 1195 1200
Gly Tyr Arg Arg Gly Ala Lys Lys Leu Glu Ser Ser Glu Glu Asn Leu
1205 1210 1215
Ser Ser Glu Asp Glu Glu Leu Pro Cys Phe Gln His Leu Leu Phe Gly
1220 1225 1230
Lys Val Asn Asn Ile Pro Ser Gln Ser Thr Arg His Ser Thr Val Ala
1235 1240 1245
Thr Glu Cys Leu Ser Lys Asn Thr Glu Glu Asn Leu Leu Ser Leu Lys
1250 1255 1260
Asn Ser Leu Asn Asp Cys Ser Asn Gln Val Ile Leu Ala Lys Ala Ser
1265 1270 1275 1280
Gln Glu His His Leu Ser Glu Glu Thr Lys Cys Ser Ala Ser Leu Phe
1285 1290 1295
Ser Ser Gln Cys Ser Glu Leu Glu Asp Leu Thr Ala Asn Thr Asn Thr
1300 1305 1310
Gln Asp Pro Phe Leu Ile Gly Ser Ser Lys Gln Met Arg His Gln Ser
1315 1320 1325
Glu Ser Gln Gly Val Gly Leu Ser Asp Lys Glu Leu Val Ser Asp Asp
1330 1335 1340
Glu Glu Arg Gly Thr Gly Leu Glu Glu Asn Asn Gln Glu Glu Gln Ser
1345 1350 1355 1360
Met Asp Ser Asn Leu Gly Glu Ala Ala Ser Gly Cys Glu Ser Glu Thr
1365 1370 1375
Ser Val Ser Glu Asp Cys Ser Gly Leu Ser Ser Gln Ser Asp Ile Leu
1380 1385 1390
Thr Thr Gln Gln Arg Asp Thr Met Gln His Asn Leu Ile Lys Leu Gln
1395 1400 1405
Gln Glu Met Ala Glu Leu Glu Ala Val Leu Glu Gln His Gly Ser Gln
1410 1415 1420
Pro Ser Asn Ser Tyr Pro Ser Ile Ile Ser Asp Ser Ser Ala Leu Glu
1425 1430 1435 1440
Asp Leu Arg Asn Pro Glu Gln Ser Thr Ser Glu Lys Ala Val Leu Thr
1445 1450 1455
Ser Gln Lys Ser Ser Glu Tyr Pro Ile Ser Gln Asn Pro Glu Gly Leu
1460 1465 1470
Ser Ala Asp Lys Phe Glu Val Ser Ala Asp Ser Ser Thr Ser Lys Asn
1475 1480 1485
Lys Glu Pro Gly Val Glu Arg Ser Ser Pro Ser Lys Cys Pro Ser Leu
1490 1495 1500
Asp Asp Arg Trp Tyr Met His Ser Cys Ser Gly Ser Leu Gln Asn Arg
1505 1510 1515 1520
Asn Tyr Pro Ser Gln Glu Glu Leu Ile Lys Val Val Asp Val Glu Glu

1525 1530 1535
 Gln Gln Leu Glu Glu Ser Gly Pro His Asp Leu Thr Glu Thr Ser Tyr
 1540 1545 1550
 Leu Pro Arg Gln Asp Leu Glu Gly Thr Pro Tyr Leu Glu Ser Gly Ile
 1555 1560 1565
 Ser Leu Phe Ser Asp Asp Pro Glu Ser Asp Pro Ser Glu Asp Arg Ala
 1570 1575 1580
 Pro Glu Ser Ala Arg Val Gly Asn Ile Pro Ser Ser Thr Ser Ala Leu
 1585 1590 1595 1600
 Lys Val Pro Gln Leu Lys Val Ala Glu Ser Ala Gln Ser Pro Ala Ala
 1605 1610 1615
 Ala His Thr Thr Asp Thr Ala Gly Tyr Asn Ala Met Glu Glu Ser Val
 1620 1625 1630
 Ser Arg Glu Lys Pro Glu Leu Thr Ala Ser Thr Glu Arg Val Asn Lys
 1635 1640 1645
 Arg Met Ser Met Val Val Ser Gly Leu Thr Pro Glu Glu Phe Met Leu
 1650 1655 1660
 Val Tyr Lys Phe Ala Arg Lys His His Ile Thr Leu Thr Asn Leu Ile
 1665 1670 1675 1680
 Thr Glu Glu Thr Thr His Val Val Met Lys Thr Asp Ala Glu Phe Val
 1685 1690 1695
 Cys Glu Arg Thr Leu Lys Tyr Phe Leu Gly Ile Ala Gly Gly Lys Trp
 1700 1705 1710
 Val Val Ser Tyr Phe Trp Val Thr Gln Ser Ile Lys Glu Arg Lys Met
 1715 1720 1725
 Leu Asn Glu His Asp Phe Glu Val Arg Gly Asp Val Val Asn Gly Arg
 1730 1735 1740
 Asn His Gln Gly Pro Lys Arg Ala Arg Glu Ser Gln Asp Arg Lys Ile
 1745 1750 1755 1760
 Phe Arg Gly Leu Glu Ile Cys Cys Tyr Gly Pro Phe Thr Asn Met Pro
 1765 1770 1775
 Thr Asp Gln Leu Glu Trp Met Val Gln Leu Cys Gly Ala Ser Val Val
 1780 1785 1790
 Lys Glu Leu Ser Ser Phe Thr Leu Gly Thr Gly Val His Pro Ile Val
 1795 1800 1805
 Val Val Gln Pro Asp Ala Trp Thr Glu Asp Asn Gly Phe His Ala Ile
 1810 1815 1820
 Gly Gln Met Cys Glu Ala Pro Val Val Thr Arg Glu Trp Val Leu Asp
 1825 1830 1835 1840
 Ser Val Ala Leu Tyr Gln Cys Gln Glu Leu Asp Thr Tyr Leu Ile Pro
 1845 1850 1855
 Gln Ile Pro His Ser His Tyr
 1860

<210> 28
 <211> 2089
 <212> PRT
 <213> Homo sapiens

<400> 28
 Met Glu Asp Thr Gln Ala Ile Asp Trp Asp Val Glu Glu Glu Glu Glu
 1 5 10 15
 Thr Glu Gln Ser Ser Glu Ser Leu Arg Cys Asn Val Glu Pro Val Gly
 20 25 30
 Arg Leu His Ile Phe Ser Gly Ala His Gly Pro Glu Lys Asp Phe Pro
 35 40 45
 Leu His Leu Gly Lys Asn Val Val Gly Arg Met Pro Asp Cys Ser Val
 50 55 60

Ala	Leu	Pro	Phe	Pro	Ser	Ile	Ser	Lys	Gln	His	Ala	Glu	Ile	Glu	Ile
65					70					75					80
Leu	Ala	Trp	Asp	Lys	Ala	Pro	Ile	Leu	Arg	Asp	Cys	Gly	Ser	Leu	Asn
				85					90					95	
Gly	Thr	Gln	Ile	Leu	Arg	Pro	Pro	Lys	Val	Leu	Ser	Pro	Gly	Val	Ser
			100					105					110		
His	Arg	Leu	Arg	Asp	Gln	Glu	Leu	Ile	Leu	Phe	Ala	Asp	Leu	Leu	Cys
		115					120					125			
Gln	Tyr	His	Arg	Leu	Asp	Val	Ser	Leu	Pro	Phe	Val	Ser	Arg	Gly	Pro
	130					135					140				
Leu	Thr	Val	Glu	Glu	Thr	Pro	Arg	Val	Gln	Gly	Glu	Thr	Gln	Pro	Gln
145					150					155					160
Arg	Leu	Leu	Leu	Ala	Glu	Asp	Ser	Glu	Glu	Glu	Val	Asp	Phe	Leu	Ser
				165					170					175	
Glu	Arg	Arg	Met	Val	Lys	Lys	Ser	Arg	Thr	Thr	Ser	Ser	Ser	Val	Ile
			180					185						190	
Val	Pro	Glu	Ser	Asp	Glu	Glu	Gly	His	Ser	Pro	Val	Leu	Gly	Gly	Leu
		195					200					205			
Gly	Pro	Pro	Phe	Ala	Phe	Asn	Leu	Asn	Ser	Asp	Thr	Asp	Val	Glu	Glu
	210					215					220				
Gly	Gln	Gln	Pro	Ala	Thr	Glu	Glu	Ala	Ser	Ser	Ala	Ala	Arg	Arg	Gly
225					230					235					240
Ala	Thr	Val	Glu	Ala	Lys	Gln	Ser	Glu	Ala	Glu	Val	Val	Thr	Glu	Ile
				245					250					255	
Gln	Leu	Glu	Lys	Asp	Gln	Pro	Leu	Val	Lys	Glu	Arg	Asp	Asn	Asp	Thr
			260					265					270		
Lys	Val	Lys	Arg	Gly	Ala	Gly	Asn	Gly	Val	Val	Pro	Ala	Gly	Val	Ile
		275					280					285			
Leu	Glu	Arg	Ser	Gln	Pro	Pro	Gly	Glu	Asp	Ser	Asp	Thr	Asp	Val	Asp
	290					295					300				
Asp	Asp	Ser	Arg	Pro	Pro	Gly	Arg	Pro	Ala	Glu	Val	His	Leu	Glu	Arg
305					310					315					320
Ala	Gln	Pro	Phe	Gly	Phe	Ile	Asp	Ser	Asp	Thr	Asp	Ala	Glu	Glu	Glu
				325					330					335	
Arg	Ile	Pro	Ala	Thr	Pro	Val	Val	Ile	Pro	Met	Lys	Lys	Arg	Lys	Ile
			340					345					350		
Phe	His	Gly	Val	Gly	Thr	Arg	Gly	Pro	Gly	Ala	Pro	Gly	Leu	Ala	His
		355					360					365			
Leu	Gln	Glu	Ser	Gln	Ala	Gly	Ser	Asp	Thr	Asp	Val	Glu	Glu	Gly	Lys
	370					375					380				
Ala	Pro	Gln	Ala	Val	Pro	Leu	Glu	Lys	Ser	Gln	Ala	Ser	Met	Val	Ile
385					390					395					400
Asn	Ser	Asp	Thr	Asp	Asp	Glu	Glu	Glu	Val	Ser	Ala	Ala	Leu	Thr	Leu
				405					410					415	
Ala	His	Leu	Lys	Glu	Ser	Gln	Pro	Ala	Ile	Trp	Asn	Arg	Asp	Ala	Glu
			420					425					430		
Glu	Asp	Met	Pro	Gln	Arg	Val	Val	Leu	Leu	Gln	Arg	Ser	Gln	Thr	Thr
		435					440					445			
Thr	Glu	Arg	Asp	Ser	Asp	Thr	Asp	Val	Glu	Glu	Glu	Glu	Leu	Pro	Val
	450					455					460				
Glu	Asn	Arg	Glu	Ala	Val	Leu	Lys	Asp	His	Thr	Lys	Ile	Arg	Ala	Leu
465					470					475					480
Val	Arg	Ala	His	Ser	Glu	Lys	Asp	Gln	Pro	Pro	Phe	Gly	Asp	Ser	Asp
				485					490					495	
Asp	Ser	Val	Glu	Ala	Asp	Lys	Ser	Ser	Pro	Gly	Ile	His	Leu	Glu	Arg
		500						505					510		
Ser	Gln	Ala	Ser	Thr	Thr	Val	Asp	Ile	Asn	Thr	Gln	Val	Glu	Lys	Glu
		515					520					525			
Val	Pro	Pro	Gly	Ser	Ala	Ile	Met	His	Ile	Lys	Lys	His	Gln	Val	Ser

530	535	540
Val Glu Gly Thr Asn Gln Thr Asp Val Lys Ala Val Gly Gly Pro Ala		
545	550	555
Lys Leu Leu Val Val Ser Leu Glu Glu Ala Trp Pro Leu His Gly Asp		560
	565	570
Cys Glu Thr Asp Ala Glu Glu Gly Thr Ser Leu Thr Ala Ser Val Val		575
	580	585
Ala Asp Val Arg Lys Ser Gln Leu Pro Ala Glu Gly Asp Ala Gly Ala		590
	595	600
Glu Trp Ala Ala Ala Val Leu Lys Gln Glu Arg Ala His Glu Val Gly		605
	610	615
Ala Gln Gly Gly Pro Pro Val Ala Gln Val Glu Gln Asp Leu Pro Ile		620
625	630	635
Ser Arg Glu Asn Leu Thr Asp Leu Val Val Asp Thr Asp Thr Leu Gly		640
	645	650
Glu Ser Thr Gln Pro Gln Arg Glu Gly Ala Gln Val Pro Thr Gly Arg		655
	660	665
Glu Arg Glu Gln His Val Gly Gly Thr Lys Asp Ser Glu Asp Asn Tyr		670
	675	680
Gly Asp Ser Glu Asp Leu Asp Leu Gln Ala Thr Gln Cys Phe Leu Glu		685
	690	695
Asn Gln Gly Leu Glu Ala Val Gln Ser Met Glu Asp Glu Pro Thr Gln		700
705	710	715
Ala Phe Met Leu Thr Pro Pro Gln Glu Leu Gly Pro Ser His Cys Ser		720
	725	730
Phe Gln Thr Thr Gly Thr Leu Asp Glu Pro Trp Glu Val Leu Ala Thr		735
	740	745
Gln Pro Phe Cys Leu Arg Glu Ser Glu Asp Ser Glu Thr Gln Pro Phe		750
	755	760
Asp Thr His Leu Glu Ala Tyr Gly Pro Cys Leu Ser Pro Pro Arg Ala		765
	770	775
Ile Pro Gly Asp Gln His Pro Glu Ser Pro Val His Thr Glu Pro Met		780
785	790	795
Gly Ile Gln Gly Arg Gly Arg Gln Thr Val Asp Lys Val Met Gly Ile		800
	805	810
Pro Lys Glu Thr Ala Glu Arg Val Gly Pro Glu Arg Gly Pro Leu Glu		815
	820	825
Arg Glu Thr Glu Lys Leu Leu Pro Glu Arg Gln Thr Asp Val Thr Gly		830
	835	840
Glu Glu Glu Leu Thr Lys Gly Lys Gln Asp Arg Glu Gln Lys Gln Leu		845
	850	855
Leu Ala Arg Asp Thr Gln Arg Gln Glu Ser Asp Lys Asn Gly Glu Ser		860
865	870	875
Ala Ser Pro Glu Arg Asp Arg Glu Ser Leu Lys Val Glu Ile Glu Thr		880
	885	890
Ser Glu Glu Ile Gln Glu Lys Gln Val Gln Lys Gln Thr Leu Pro Ser		895
	900	905
Lys Ala Phe Glu Arg Glu Val Glu Arg Pro Val Ala Asn Arg Glu Cys		910
	915	920
Asp Pro Ala Glu Leu Glu Glu Lys Val Pro Lys Val Ile Leu Glu Arg		925
	930	935
Asp Thr Gln Arg Gly Glu Pro Glu Gly Gly Ser Gln Asp Gln Lys Gly		940
945	950	955
Gln Ala Ser Ser Pro Thr Pro Glu Pro Gly Val Gly Ala Gly Asp Leu		960
	965	970
Pro Gly Pro Thr Ser Ala Pro Val Pro Ser Gly Ser Gln Ser Gly Gly		975
	980	985
Arg Gly Ser Pro Val Ser Pro Arg Arg His Gln Lys Gly Leu Leu Asn		990
	995	1000
		1005

Cys Lys Met Pro Pro Ala Glu Lys Ala Ser Arg Ile Arg Ala Ala Glu
1010 1015 1020
Lys Val Ser Arg Gly Asp Gln Glu Ser Pro Asp Ala Cys Leu Pro Pro
1025 1030 1035 1040
Ala Val Pro Glu Ala Pro Ala Pro Pro Gln Lys Pro Leu Asn Ser Gln
1045 1050 1055
Ser Gln Lys His Leu Ala Pro Pro Pro Leu Leu Ser Pro Leu Leu Pro
1060 1065 1070
Ser Ile Lys Pro Thr Val Arg Lys Thr Arg Gln Asp Gly Ser Gln Glu
1075 1080 1085
Ala Pro Glu Ala Pro Leu Ser Ser Glu Leu Glu Pro Phe His Pro Lys
1090 1095 1100
Pro Lys Ile Arg Thr Arg Lys Ser Ser Arg Met Thr Pro Phe Pro Ala
1105 1110 1115 1120
Thr Ser Ala Ala Pro Glu Pro His Pro Ser Thr Ser Thr Ala Gln Pro
1125 1130 1135
Val Thr Pro Lys Pro Thr Ser Gln Ala Thr Arg Ser Arg Thr Asn Arg
1140 1145 1150
Ser Ser Val Lys Thr Pro Glu Pro Val Val Pro Thr Ala Pro Glu Leu
1155 1160 1165
Gln Pro Ser Thr Ser Thr Asp Gln Pro Val Thr Ser Glu Pro Thr Ser
1170 1175 1180
Gln Val Thr Arg Gly Arg Lys Ser Arg Ser Ser Val Lys Thr Pro Glu
1185 1190 1195 1200
Thr Val Val Pro Thr Ala Leu Glu Leu Gln Pro Ser Thr Ser Thr Asp
1205 1210 1215
Arg Pro Val Thr Ser Glu Pro Thr Ser Gln Ala Thr Arg Gly Arg Lys
1220 1225 1230
Asn Arg Ser Ser Val Lys Thr Pro Glu Pro Val Val Pro Thr Ala Pro
1235 1240 1245
Glu Leu Gln Pro Ser Thr Ser Thr Asp Gln Pro Val Thr Ser Glu Pro
1250 1255 1260
Thr Tyr Gln Ala Thr Arg Gly Arg Lys Asn Arg Ser Ser Val Lys Thr
1265 1270 1275 1280
Pro Glu Pro Val Val Pro Thr Ala Pro Glu Leu Arg Pro Ser Thr Ser
1285 1290 1295
Thr Asp Arg Pro Val Thr Pro Lys Pro Thr Ser Arg Thr Thr Arg Ser
1300 1305 1310
Arg Thr Asn Met Ser Ser Val Lys Thr Pro Glu Thr Val Val Pro Thr
1315 1320 1325
Ala Pro Glu Leu Gln Ile Ser Thr Ser Thr Asp Gln Pro Val Thr Pro
1330 1335 1340
Lys Pro Thr Ser Arg Thr Thr Arg Ser Arg Thr Asn Met Ser Ser Val
1345 1350 1355 1360
Lys Asn Pro Glu Ser Thr Val Pro Ile Ala Pro Glu Leu Pro Pro Ser
1365 1370 1375
Thr Ser Thr Glu Gln Pro Val Thr Pro Glu Pro Thr Ser Arg Ala Thr
1380 1385 1390
Arg Gly Arg Lys Asn Arg Ser Ser Gly Lys Thr Pro Glu Thr Leu Val
1395 1400 1405
Pro Thr Ala Pro Lys Leu Glu Pro Ser Thr Ser Thr Asp Gln Pro Val
1410 1415 1420
Thr Pro Glu Pro Thr Ser Gln Ala Thr Arg Gly Arg Thr Asn Arg Ser
1425 1430 1435 1440
Ser Val Lys Thr Pro Glu Thr Val Val Pro Thr Ala Pro Glu Leu Gln
1445 1450 1455
Pro Ser Thr Ser Thr Asp Gln Pro Val Thr Pro Glu Pro Thr Ser Gln
1460 1465 1470
Ala Thr Arg Gly Arg Thr Asp Arg Ser Ser Val Lys Thr Pro Glu Thr

1475	1480	1485
Val Val Pro Thr Ala Pro Glu Leu Gln Ala Ser Ala Ser Thr Asp Gln		
1490	1495	1500
Pro Val Thr Ser Glu Pro Thr Ser Arg Thr Thr Arg Gly Arg Lys Asn		
1505	1510	1515
Arg Ser Ser Val Lys Thr Pro Glu Thr Val Val Pro Ala Ala Pro Glu		
1525	1530	1535
Leu Gln Pro Pro Thr Ser Thr Asp Arg Pro Val Thr Pro Glu Pro Thr		
1540	1545	1550
Ser Arg Ala Thr Arg Gly Arg Thr Asn Arg Ser Ser Val Lys Thr Pro		
1555	1560	1565
Glu Ser Ile Val Pro Ile Ala Pro Glu Leu Gln Pro Ser Thr Ser Arg		
1570	1575	1580
Asn Gln Leu Val Thr Pro Glu Pro Thr Ser Arg Ala Thr Arg Cys Arg		
1585	1590	1595
Thr Asn Arg Ser Ser Val Lys Thr Pro Glu Pro Val Val Pro Thr Ala		
1605	1610	1615
Pro Glu Pro His Pro Thr Thr Ser Thr Asp Gln Pro Val Thr Pro Lys		
1620	1625	1630
Leu Thr Ser Arg Ala Thr Arg Arg Lys Thr Asn Arg Ser Ser Val Lys		
1635	1640	1645
Thr Pro Lys Pro Val Glu Pro Ala Ala Ser Asp Leu Glu Pro Phe Thr		
1650	1655	1660
Pro Thr Asp Gln Ser Val Thr Pro Glu Ala Ile Ala Gln Gly Gly Gln		
1665	1670	1675
Ser Lys Thr Leu Arg Ser Ser Thr Val Arg Ala Met Pro Val Pro Thr		
1685	1690	1695
Thr Pro Glu Phe Gln Ser Pro Val Thr Thr Asp Gln Pro Ile Ser Pro		
1700	1705	1710
Glu Pro Ile Thr Gln Pro Ser Cys Ile Lys Arg Gln Arg Ala Ala Gly		
1715	1720	1725
Asn Pro Gly Ser Leu Ala Ala Pro Ile Asp His Lys Pro Cys Ser Ala		
1730	1735	1740
Pro Leu Glu Pro Lys Ser Gln Ala Ser Arg Asn Gln Arg Trp Gly Ala		
1745	1750	1755
Val Arg Ala Ala Glu Ser Leu Thr Ala Ile Pro Glu Pro Ala Ser Pro		
1765	1770	1775
Gln Leu Leu Glu Thr Pro Ile His Ala Ser Gln Ile Gln Lys Val Glu		
1780	1785	1790
Pro Ala Gly Arg Ser Arg Phe Thr Pro Glu Leu Gln Pro Lys Ala Ser		
1795	1800	1805
Gln Ser Arg Lys Arg Ser Leu Ala Thr Met Asp Ser Pro Pro His Gln		
1810	1815	1820
Lys Gln Pro Gln Arg Gly Glu Val Ser Gln Lys Thr Val Ile Ile Lys		
1825	1830	1835
Glu Glu Glu Glu Asp Thr Ala Glu Lys Pro Gly Lys Glu Glu Asp Val		
1845	1850	1855
Val Thr Pro Lys Pro Gly Lys Arg Lys Arg Asp Gln Ala Glu Glu Glu		
1860	1865	1870
Pro Asn Arg Ile Pro Ser Arg Ser Leu Arg Arg Thr Lys Leu Asn Gln		
1875	1880	1885
Glu Ser Thr Ala Pro Lys Val Leu Phe Thr Gly Val Val Asp Ala Arg		
1890	1895	1900
Gly Glu Arg Ala Val Leu Ala Leu Gly Gly Ser Leu Ala Gly Ser Ala		
1905	1910	1915
Ala Glu Ala Ser His Leu Val Thr Asp Arg Ile Arg Arg Thr Val Lys		
1925	1930	1935
Phe Leu Cys Ala Leu Gly Arg Gly Ile Pro Ile Leu Ser Leu Asp Trp		
1940	1945	1950

Leu His Gln Ser Arg Lys Ala Gly Phe Phe Leu Pro Pro Asp Glu Tyr
 1955 1960 1965
 Val Val Thr Asp Pro Glu Gln Glu Lys Asn Phe Gly Phe Ser Leu Gln
 1970 1975 1980
 Asp Ala Leu Ser Arg Ala Arg Glu Arg Arg Leu Leu Glu Gly Tyr Glu
 1985 1990 1995 2000
 Ile Tyr Val Thr Pro Gly Val Gln Pro Pro Pro Gln Met Gly Glu
 2005 2010 2015
 Ile Ile Ser Cys Cys Gly Gly Thr Tyr Leu Pro Ser Met Pro Arg Ser
 2020 2025 2030
 Tyr Lys Pro Gln Arg Val Val Ile Thr Cys Pro Gln Asp Phe Pro His
 2035 2040 2045
 Cys Ser Ile Pro Leu Arg Val Gly Leu Pro Leu Leu Ser Pro Glu Phe
 2050 2055 2060
 Leu Leu Thr Gly Val Leu Lys Gln Glu Ala Lys Pro Glu Ala Phe Val
 2065 2070 2075 2080
 Leu Ser Pro Leu Glu Met Ser Ser Thr
 2085

<210> 29
 <211> 1309
 <212> PRT
 <213> Homo sapiens

<400> 29
 Met Ser Gly Gln Leu Val Gln Trp Lys Ser Ser Pro Asp Arg Val Thr
 1 5 10 15
 Gln Ser Ala Ile Lys Glu Ala Leu His Ser Pro Leu Ala Asp Gly Asp
 20 25 30
 Met Asn Glu Met Asn Val Pro Val Asp Pro Leu Glu Asn Lys Val Asn
 35 40 45
 Ser Thr Asn Ile Ile Glu Gly Ser Pro Lys Ala Asn Pro Asn Pro Val
 50 55 60
 Lys Phe Met Asn Thr Ser Glu Ile Phe Gln Lys Ser Leu Gly Leu Leu
 65 70 75 80
 Asp Glu Ser Pro Arg His Asp Asp Glu Leu Asn Ile Glu Val Gly Asp
 85 90 95
 Asn Asp Arg Pro Asn Ala Asn Ile Leu His Asn Glu Arg Thr Pro Asp
 100 105 110
 Leu Asp Arg Ile Ala Asn Phe Phe Lys Ser Asn Arg Thr Pro Gly Lys
 115 120 125
 Glu Asn Leu Leu Thr Lys Tyr Gln Ser Ser Asp Leu Glu Asp Thr Pro
 130 135 140
 Leu Met Leu Arg Lys Lys Met Thr Phe Gln Thr Pro Thr Asp Pro Leu
 145 150 155 160
 Glu Gln Lys Thr Phe Lys Lys Leu Lys Ser Asp Thr Gly Phe Cys Tyr
 165 170 175
 Tyr Gly Glu Gln Asn Asp Gly Glu Glu Asn Ala Ser Leu Glu Val Thr
 180 185 190
 Glu Ala Asp Ala Thr Phe Val Gln Met Ala Glu Arg Ser Ala Asp Asn
 195 200 205
 Tyr Asp Cys Ala Leu Glu Gly Ile Val Thr Pro Lys Arg Tyr Lys Asp
 210 215 220
 Glu Leu Ser Lys Ser Gly Gly Met Gln Asp Glu Arg Val Gln Lys Thr
 225 230 235 240
 Gln Ile Met Ile Ser Ala Glu Ser Pro Asn Ser Ile Ser Ser Tyr Asp
 245 250 255
 Lys Asn Lys Ile Thr Gly Asn Gly Arg Thr Thr Arg Asn Val Asn Lys

Lys	Arg	Glu	Pro	Ser	Cys	Ser	Ile	Thr	Ile	Gln	Thr	Gly	Glu	Thr	Gly		
			740					745					750				
Ser	Gly	Lys	Asp	Ser	Lys	Glu	Gln	Ser	Tyr	Val	Phe	Pro	Glu	Gly	Ile		
		755					760					765					
Arg	Thr	Ala	Asp	Asn	Ser	Phe	Leu	Ser	Lys	Asp	Asp	Ile	Ile	Phe	Gly		
	770					775					780						
Asn	Ala	Val	Trp	Cys	Gln	Tyr	Thr	Trp	Asn	Tyr	Lys	Phe	Tyr	Pro	Gly		
785					790					795					800		
Ile	Leu	Leu	Glu	Val	Asp	Thr	Asn	Gln	Asp	Gly	Cys	Trp	Ile	Tyr	Phe		
			805						810					815			
Glu	Thr	Gly	Arg	Ser	Leu	Thr	Lys	Asp	Glu	Asp	Ile	Tyr	Tyr	Leu	Asp		
		820						825					830				
Ile	Arg	Ile	Gly	Asp	Ala	Val	Thr	Phe	Asp	Gly	Asn	Glu	Tyr	Val	Val		
	835						840					845					
Val	Gly	Leu	Glu	Cys	Arg	Ser	His	Asp	Leu	Asn	Ile	Ile	Arg	Cys	Ile		
	850					855					860						
Arg	Gly	Tyr	Asp	Thr	Val	His	Leu	Lys	Lys	Lys	Asn	Ala	Ser	Gly	Leu		
865					870					875					880		
Leu	Gly	Lys	Arg	Thr	Leu	Ile	Lys	Ala	Leu	Ser	Ser	Ile	Ser	Leu	Asp		
			885					890						895			
Leu	Ser	Glu	Trp	Ala	Lys	Arg	Ala	Lys	Ile	Ile	Leu	Glu	Asp	Asn	Glu		
		900						905					910				
Lys	Asn	Lys	Gly	Asp	Ala	Tyr	Arg	Tyr	Leu	Arg	His	Pro	Ile	Arg	Gly		
	915						920					925					
Arg	Lys	Ser	Met	Thr	Asn	Val	Leu	Ser	Pro	Lys	Lys	His	Thr	Asp	Asp		
	930				935						940						
Glu	Lys	Asp	Ile	Asn	Thr	His	Thr	Glu	Val	Tyr	Asn	Asn	Glu	Ile	Glu		
945					950					955				960			
Ser	Ser	Ser	Glu	Lys	Lys	Glu	Ile	Val	Lys	Lys	Asp	Ser	Arg	Asp	Ala		
			965					970						975			
Leu	Ala	Glu	His	Ala	Gly	Ala	Pro	Ser	Leu	Leu	Phe	Ser	Ser	Gly	Glu		
		980						985					990				
Ile	Arg	Thr	Gly	Asn	Val	Phe	Asp	Lys	Cys	Ile	Phe	Val	Leu	Thr	Ser		
	995						1000					1005					
Leu	Phe	Glu	Asn	Arg	Glu	Glu	Leu	Arg	Gln	Thr	Ile	Glu	Ser	Gln	Gly		
	1010					1015					1020						
Gly	Thr	Val	Ile	Glu	Ser	Gly	Phe	Ser	Thr	Leu	Phe	Asn	Phe	Thr	His		
1025					1030					1035				1040			
Pro	Leu	Ala	Lys	Ser	Leu	Val	Asn	Lys	Gly	Asn	Thr	Asp	Asn	Ile	Arg		
			1045						1050					1055			
Glu	Leu	Ala	Leu	Lys	Leu	Ala	Trp	Lys	Pro	His	Ser	Leu	Phe	Ala	Asp		
		1060						1065					1070				
Cys	Arg	Phe	Ala	Cys	Leu	Ile	Thr	Lys	Arg	His	Leu	Arg	Ser	Leu	Lys		
	1075						1080					1085					
Tyr	Leu	Glu	Thr	Leu	Ala	Leu	Gly	Trp	Pro	Thr	Leu	His	Trp	Lys	Phe		
	1090					1095					1100						
Ile	Ser	Ala	Cys	Ile	Glu	Lys	Lys	Arg	Ile	Val	Pro	His	Leu	Ile	Tyr		
1105					1110					1115				1120			
Gln	Tyr	Leu	Leu	Pro	Ser	Gly	Glu	Ser	Phe	Arg	Leu	Ser	Leu	Asp	Ser		
			1125						1130					1135			
Pro	Ser	Lys	Gly	Gly	Ile	Ile	Lys	Ser	Asn	Asn	Ile	Phe	Ser	Phe	Tyr		
		1140						1145					1150				
Thr	Gln	Phe	Leu	Arg	Gly	Ser	Asn	Leu	Arg	Asp	Gln	Ile	Cys	Gly	Val		
	1155						1160					1165					
Lys	Lys	Met	Leu	Asn	Asp	Tyr	Ile	Val	Ile	Val	Trp	Gly	Arg	Ser	Glu		
	1170					1175					1180						
Leu	Asp	Ser	Phe	Val	Lys	Phe	Ala	Phe	Ala	Cys	Leu	Ser	Ala	Gly	Arg		
1185					1190					1195				1200			
Met	Leu	Thr	Ile	Asp	Leu	Pro	Asn	Ile	Asp	Val	Asp	Asp	Thr	Glu	Pro		

				1205				1210				1215			
Leu	Leu	Asn	Ala	Leu	Asp	Ser	Leu	Val	Pro	Arg	Ile	Gly	Ser	Glu	Leu
			1220					1225				1230			
Ser	Asn	Arg	Lys	Leu	Lys	Phe	Leu	Ile	Tyr	Ala	Asn	Glu	Asn	Asn	Gly
		1235					1240					1245			
Lys	Ser	Gln	Met	Lys	Leu	Leu	Glu	Arg	Leu	Arg	Ser	Gln	Ile	Ser	Leu
	1250					1255				1260					
Lys	Phe	Lys	Lys	Phe	Asn	Tyr	Ile	Phe	His	Thr	Glu	Ser	Lys	Glu	Trp
1265				1270					1275					1280	
Leu	Ile	Gln	Thr	Ile	Ile	Asn	Glu	Asp	Thr	Gly	Phe	His	Asp	Asp	Ile
			1285				1290					1295			
Thr	Asp	Asn	Asp	Ile	Tyr	Asn	Thr	Ile	Ser	Glu	Val	Arg			
		1300					1305								

<210> 30
 <211> 3
 <212> PRT
 <213> Homo sapiens

<220>
 <221> VARIANT
 <222> 2
 <223> Xaa = phosphorylated Thr or phosphorylated Ser

<221> VARIANT
 <222> 3
 <223> Pro or any amino acid

<400> 30
 Ser Xaa Xaa
 1

<210> 31
 <211> 16
 <212> PRT
 <213> Homo sapiens

<220>
 <221> VARIANT
 <222> 3, 4, 5, 6, 9, 10, 11, 12
 <223> Xaa = Any Amino Acid except Cys

<221> PHOSPHORYLATION
 <222> 7
 <223> Tyrosine at position 7 is phosphorylated Tyrosine

<400> 31
 Met Ala Xaa Xaa Xaa Xaa Thr Pro Xaa Xaa Xaa Xaa Ala Lys Lys Lys
 1 5 10 15

<210> 32
 <211> 15
 <212> PRT
 <213> Homo sapiens

<220>

<221> VARIANT
<222> 3, 4, 5, 6, 8, 9, 10, 11
<223> Xaa = Any Amino Acid except Cys

<221> PHOSPHORYLATION
<222> 7
<223> Thr at position 7 is phosphorylated

<400> 32
Met Ala Xaa Xaa Xaa Xaa Thr Xaa Xaa Xaa Xaa Ala Lys Lys Lys
1 5 10 15

<210> 33
<211> 16
<212> PRT
<213> Homo sapiens

<220>
<221> VARIANT
<222> 3, 4, 5, 6, 9, 10, 11, 12
<223> Xaa = Any Amino Acid except Cys

<221> PHOSPHORYLATION
<222> 8
<223> Threonine at position 8 is phosphorylated.

<400> 33
Met Ala Xaa Xaa Xaa Xaa Ser Thr Xaa Xaa Xaa Xaa Ala Lys Lys Lys
1 5 10 15

<210> 34
<211> 14
<212> PRT
<213> Homo sapiens

<220>
<221> VARIANT
<222> 3, 4, 5, 8, 9, 10
<223> Xaa = Any Amino Acid except Cys

<221> PHOSPHORYLATION
<222> 6
<223> Ser at position 6 is phosphorylated

<400> 34
Met Ala Xaa Xaa Xaa Ser Pro Xaa Xaa Xaa Ala Lys Lys Lys
1 5 10

<210> 35
<211> 15
<212> PRT
<213> Homo sapiens

<220>
<221> VARIANT
<222> 3, 4, 5, 6, 8, 9, 10, 11

<223> Xaa = Any Amino Acid except Cys

<221> PHOSPHORYLATION

<222> 7

<223> Ser at position 7 is phosphorylated

<400> 35

Met	Ala	Xaa	Xaa	Xaa	Xaa	Ser	Xaa	Xaa	Xaa	Xaa	Ala	Lys	Lys	Lys
1				5					10					15

<210> 36

<211> 16

<212> PRT

<213> Homo sapiens

<220>

<221> VARIANT

<222> 3, 4, 5, 6, 9, 10, 11, 12

<223> Xaa = Any Amino Acid except Cys.

<221> PHOSPHORYLATION

<222> 8

<223> Thr at position 8 is phosphorylated

<400> 36

Met	Ala	Xaa	Xaa	Xaa	Xaa	Ser	Thr	Xaa	Xaa	Xaa	Xaa	Ala	Lys	Lys	Lys
1				5					10					15	

<210> 37

<400> 37

000

<210> 38

<211> 7

<212> PRT

<213> Homo sapiens

<220>

<221> VARIANT

<222> 1

<223> Xaa at position 1 is Pro or Phe

<221> VARIANT

<222> 2

<223> Xaa at position 2 is Pro or any hydrophobic amino acid

<221> VARIANT

<222> 3

<223> Xaa at position 3 is any hydrophobic amino acid, Ala or Gln

<221> VARIANT

<222> 4

<223> Xaa at position 4 is Thr, Gln, His or Met

<221> VARIANT
 <222> 6
 <223> Xaa at position 6 is phosphorylated Thr or
 phosphorylated Ser

<221> VARIANT
 <222> 7
 <223> Xaa at position 7 is Pro or any amino acid

<400> 38
 Xaa Xaa Xaa Xaa Ser Xaa Xaa
 1 5

<210> 39
 <211> 7
 <212> PRT
 <213> Homo sapiens

<220>
 <221> PHOSPHORYLATION
 <222> 5
 <223> Thr at position 5 is phosphorylated Thr

<400> 39
 Pro Met Gln Ser Thr Pro Leu
 1 5

<210> 40
 <211> 20
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MOD_RES
 <222> 1
 <223> Glx at position 1 is biotinylated

<221> PHOSPHORYLATION
 <222> 11
 <223> Thr at position 11 is phosphorylated

<221> VARIANT
 <222> 9
 <223> Xaa at position 9 is a biased mixture of the amino
 acids Pro, Leu, Ile, Val, Phe, Met or Trp.

<221> VARIANT
 <222> 7, 8, 10, 13, 14, 15, 16
 <223> Xaa = Any Amino Acid except Cys

<400> 40
 Glx Gly Glx Gly Gly Ala Xaa Xaa Xaa Xaa Thr Pro Xaa Xaa Xaa Xaa
 1 5 10 15
 Ala Lys Lys Lys
 20

<210> 41
 <211> 20
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> MOD_RES
 <222> 1
 <223> Amino hexanoic acid at position 1 is biotinylated

 <221> VARIANT
 <222> 7, 8, 10, 13, 14, 15, 16

 7,
 8, 10, 13, 14, 15, 16
 <223> Xaa = Any Amino Acid except Cys

 <221> VARIANT
 <222> 9
 <223> Xaa = biased mixture of Pro, Leu, Ile, Val, Phe,
 Met or Trp.

 <400> 41
 Glx Gly Glx Gly Gly Ala Xaa Xaa Xaa Xaa Thr Pro Xaa Xaa Xaa Xaa
 1 5 10 15
 Ala Lys Lys Lys
 20

 <210> 42
 <211> 16
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> VARIANT
 <222> 3, 4, 5, 6, 9, 10, 11, 12
 <223> Xaa = Any Amino Acid

 <221> PHOSPHORYLATION
 <222> 7
 <223> Thr at position 7 is phosphorylated

 <400> 42
 Met Ala Xaa Xaa Xaa Xaa Thr Pro Xaa Xaa Xaa Xaa Ala Lys Lys Lys
 1 5 10 15

 <210> 43
 <211> 15
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> VARIANT
 <222> 3, 4, 5, 6, 8, 9, 10, 11
 <223> Xaa = Any Amino Acid

 <221> PHOSPHORYLATION

<222> 7
 <223> Thr at position 7 is phosphorylated

<400> 43
 Met Ala Xaa Xaa Xaa Xaa Thr Xaa Xaa Xaa Xaa Ala Lys Lys Lys
 1 5 10 15

<210> 44
 <211> 16
 <212> PRT
 <213> Homo sapiens

<220>
 <221> VARIANT
 <222> 3, 4, 5, 6, 9, 10, 11, 12
 <223> Xaa = Any Amino Acid

<221> PHOSPHORYLATION
 <222> 8
 <223> Thr at position 8 is phosphorylated

<400> 44
 Met Ala Xaa Xaa Xaa Xaa Ser Thr Xaa Xaa Xaa Xaa Ala Lys Lys Lys
 1 5 10 15

<210> 45
 <211> 14
 <212> PRT
 <213> Homo sapiens

<220>
 <221> VARIANT
 <222> 3, 4, 5, 8, 9, 10
 <223> Xaa = Any Amino Acid

<221> PHOSPHORYLATION
 <222> 6
 <223> Ser at position 6 is phosphorylated

<400> 45
 Met Ala Xaa Xaa Xaa Ser Pro Xaa Xaa Xaa Ala Lys Lys Lys
 1 5 10

<210> 46
 <211> 15
 <212> PRT
 <213> Homo sapiens

<220>
 <221> VARIANT
 <222> 3, 4, 5, 6, 8, 9, 10, 11
 <223> Xaa = Any Amino Acid

<221> PHOSPHORYLATION
 <222> 7
 <223> Serine at position 7 is phosphorylated

<400> 46
 Met Ala Xaa Xaa Xaa Xaa Ser Xaa Xaa Xaa Xaa Ala Lys Lys Lys
 1 5 10 15

<210> 47
 <211> 16
 <212> PRT
 <213> Homo sapiens

<220>
 <221> VARIANT
 <222> 3, 4, 5, 6, 9, 10, 11, 12
 <223> Xaa = Any Amino Acid

<221> PHOSPHORYLATION
 <222> 8
 <223> Ser at position 8 is phosphorylated

<400> 47
 Met Ala Xaa Xaa Xaa Xaa Ser Ser Xaa Xaa Xaa Xaa Ala Lys Lys Lys
 1 5 10 15

<210> 48
 <211> 16
 <212> PRT
 <213> Homo sapiens

<220>
 <221> VARIANT
 <222> 3, 4, 5, 6, 9, 10, 11, 12
 <223> Xaa = Any Amino Acid

<221> PHOSPHORYLATION
 <222> 7
 <223> Thr at position 7 is phosphorylated

<400> 48
 Met Ala Xaa Xaa Xaa Xaa Thr Pro Xaa Xaa Xaa Xaa Ala Lys Lys Lys
 1 5 10 15

<210> 49
 <211> 16
 <212> PRT
 <213> Homo sapiens

<220>
 <221> VARIANT
 <222> 3, 4, 5, 6, 9, 10, 11, 12
 <223> Xaa = Any Amino Acid

<221> PHOSPHORYLATION
 <222> 8
 <223> Thr at position 8 is phosphorylated

<400> 49
 Met Ala Xaa Xaa Xaa Xaa Ser Thr Xaa Xaa Xaa Xaa Ala Lys Lys Lys

1	5	10	15
---	---	----	----

<210> 50
 <211> 20
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> VARIANT
 <222> 7, 8, 10, 13, 14, 15, 16
 <223> Xaa = Any Amino Acid except Cys

 <221> MOD_RES
 <222> 1
 <223> Glx at position 1 is biotinylated

 <221> VARIANT
 <222> 9
 <223> Xaa = biased mixture of Pro, Leu, Ile, Val, Phe,
 Met or Trp.

 <221> PHOSPHORYLATION
 <222> 11
 <223> Thr position 11 is phosphorylated

 <400> 50
 Glx Gly Glx Gly Gly Ala Xaa Xaa Xaa Xaa Thr Pro Xaa Xaa Xaa Xaa
 1 5 10 15
 Ala Lys Lys Lys
 20

<210> 51
 <211> 20
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> VARIANT
 <222> 7, 8, 10, 13, 14, 15, 16
 <223> Xaa = Any Amino Acid except Cys

 <221> MOD_RES
 <222> 1
 <223> Glx at position 1 is biotinylated

 <221> VARIANT
 <222> 9
 <223> Xaa at position 9 is a biased mixture of Pro, Leu,
 Ile, Val, Phe, Met or Trp

 <400> 51
 Glx Gly Glx Gly Gly Ala Xaa Xaa Asx Xaa Thr Pro Xaa Xaa Xaa Xaa
 1 5 10 15
 Ala Lys Lys Lys
 20

<210> 52
 <211> 16
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> PHOSPHORYLATION
 <222> 8
 <223> Thr at position 8 is phosphorylated

 <400> 52
 Met Ala Gly Pro Met Gln Ser Thr Pro Leu Asn Gly Ala Tyr Lys Lys
 1 5 10 15

<210> 53
 <211> 16
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> VARIANT
 <222> 3, 4, 5, 10, 11, 12
 <223> Xaa = Any Amino Acid

 <221> VARIANT
 <222> 6
 <223> Xaa = Ala, Ile, Leu, Met, Asn, Pro, Ser, Thr or Val

<221> VARIANT
 <222> 7
 <223> Xaa = Phosphorylated Ser or Phosphorylated Thr

 <221> VARIANT
 <222> 9
 <223> Xaa = 25% Glu and 75% any amino acid except Arg, Cys, His or Lys

<400> 53
 Met Ala Xaa Xaa Xaa Asx Xaa Thr Gln Xaa Xaa Xaa Ala Lys Lys Lys
 1 5 10 15

<210> 54
 <211> 15
 <212> PRT
 <213> Homo sapiens

<220>
 <221> VARIANT
 <222> 3, 4, 5, 6, 8, 9, 10, 11
 <223> Xaa = Any Amino Acid

 <221> PHOSPHORYLATION
 <222> 7
 <223> Thr at position 7 is phosphorylated

 <400> 54

Met Ala Xaa Xaa Xaa Xaa Thr Xaa Xaa Xaa Xaa Ala Lys Lys Lys
 1 5 10 15

<210> 55

<211> 16

<212> PRT

<213> Homo sapiens

<220>

<221> VARIANT

<222> 3, 4, 5, 6, 8, 9, 10, 11, 12

<223> Xaa = Any Amino Acid except Cys

<221> PHOSPHORYLATION

<222> 7

<223> Ser at position 7 is phosphorylated

<400> 55

Met Ala Xaa Xaa Xaa Xaa Ser Xaa Xaa Xaa Xaa Xaa Ala Lys Lys Lys
 1 5 10 15

<210> 56

<211> 16

<212> PRT

<213> Homo sapiens

<220>

<221> VARIANT

<222> 3, 4, 5, 7, 9, 10, 11

<223> Xaa = Any Amino Acid except Cys

<221> VARIANT

<222> 6

<223> Xaa = Ala, Ile, Leu, Met, Asn, Pro, Ser, Thr or Val

<221> VARIANT

<222> 7

<223> Xaa = phosphorylated Ser or phosphorylated Thr

<221> VARIANT

<222> 9

<223> Xaa =25% Glu and 75% any amino acid except Arg, Cys, His or Lys

<400> 56

Met Ala Xaa Xaa Xaa Xaa Xaa Gln Xaa Xaa Xaa Xaa Ala Lys Lys Lys
 1 5 10 15

<210> 57

<211> 20

<212> PRT

<213> Homo sapiens

<220>

<221> MOD_RES

<222> 1
 <223> Glx at position 1 is biotinylated

 <221> VARIANT
 <222> 7,8,9,14,15,16
 <223> Xaa = any amino acid except

 <221> VARIANT
 <222> 10
 <223> Xaa = biased mixture of Ala, Ile, Leu, Met, Asn,
 Pro, Ser, Thr, or Val.

 <221> VARIANT
 <222> 11
 <223> Xaa = phosphorylated Ser or phosphorylated Thr

 <221> VARIANT
 <222> 13
 <223> Xaa = biased mixture of 25% Glu and 75% any amino
 acid except Arg, Cys, His, or Lys.

 <400> 57
 Glx Gly Glx Gly Gly Ala Xaa Xaa Xaa Xaa Xaa Gln Xaa Xaa Xaa Xaa
 1 5 10 15
 Ala Lys Lys Lys
 20

 <210> 58
 <211> 20
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> MOD_RES
 <222> 1
 <223> Glx at position 1 is biotinylated

 <221> VARIANT
 <222> 10
 <223> Xaa = Ala, Ile, Leu, Met, Asn, Pro, Ser, Thr or
 Val.

 <221> VARIANT
 <222> 11
 <223> Xaa = Ser or Thr.

 <221> VARIANT
 <222> 13
 <223> Xaa = 25% Glu and 75% any amino acid except Arg,
 Cys, His or Lys

 <221> VARIANT
 <222> 7, 8, 9, 14, 15, 16
 <223> Xaa= any amino acid

 <400> 58
 Glx Gly Glx Gly Gly Ala Xaa Xaa Xaa Xaa Xaa Gln Xaa Xaa Xaa Xaa
 1 5 10 15

Ala Lys Lys Lys
20

<210> 59
<211> 15
<212> PRT
<213> Homo sapiens

<220>
<221> VARIANT
<222> 6
<223> Xaa = biased mixture Ala, Ile, Leu, Met, Asn, Pro,
Ser, Thr, or Val

<221> VARIANT
<222> 7
<223> Xaa = phosphorylated Ser or phosphorylated Thr at
position 7

<221> VARIANT
<222> 9
<223> Xaa = biased mixture of 25% Glu and 75% any amino
acid except Arg, Cys, His or Lys.

<221> VARIANT
<222> 3, 4, 5, 10, 11, 12
<223> Xaa = any amino acid except Cys.

<400> 59
Gly Ala Xaa Xaa Xaa Asx Xaa Gln Xaa Xaa Xaa Ala Lys Lys Lys
1 5 10 15

<210> 60
<211> 15
<212> PRT
<213> Homo sapiens

<220>
<221> VARIANT
<222> 3, 4, 5, 6, 8, 9, 10, 11
<223> Xaa = Any Amino Acid except Cys

<221> PHOSPHORYLATION
<222> 7
<223> Thr at position 7 is phosphorylated

<400> 60
Met Ala Xaa Xaa Xaa Xaa Thr Xaa Xaa Xaa Xaa Ala Lys Lys Lys
1 5 10 15

<210> 61
<211> 16
<212> PRT
<213> Homo sapiens

<220>

<221> VARIANT
 <222> 3, 4, 5, 6, 8, 9, 10, 11, 12
 <223> Xaa = Any Amino Acid except Cys.

<221> PHOSPHORYLATION
 <222> 7
 <223> Ser at position 7 is phosphorylated

<400> 61
 Met Ala Xaa Xaa Xaa Xaa Ser Xaa Xaa Xaa Xaa Xaa Ala Lys Lys Lys
 1 5 10 15

<210> 62
 <211> 15
 <212> PRT
 <213> Homo sapiens

<220>
 <221> VARIANT
 <222> 8
 <223> Thr at position 8 is phosphorylated

<400> 62
 Met Ala Gly Pro Met Gln Ser Thr Pro Leu Asn Gly Ala Lys Lys
 1 5 10 15

<210> 63
 <211> 15
 <212> PRT
 <213> Homo sapiens

<400> 63
 Met Ala Gly Pro Met Gln Ser Thr Pro Leu Asn Gly Ala Lys Lys
 1 5 10 15

<210> 64
 <211> 9
 <212> PRT
 <213> Homo sapiens

<220>
 <221> VARIANT
 <222> 4
 <223> Xaa = phosphorylated Ser or phosphorylated Thr

<400> 64
 Tyr Asp Ile Xaa Gln Val Phe Pro Phe
 1 5

<210> 65
 <211> 16
 <212> PRT
 <213> Homo sapiens

<400> 65

Gly Ala Ala Tyr Asp Ile Ser Gln Val Phe Pro Phe Ala Lys Lys Lys
 1 5 10 15

<210> 66
 <211> 16
 <212> PRT
 <213> Homo sapiens

<400> 66
 Gly Ala Ala Tyr Asp Ile Thr Gln Val Phe Pro Phe Ala Lys Lys Lys
 1 5 10 15

<210> 67
 <211> 16
 <212> PRT
 <213> Homo sapiens

<400> 67
 Gly Ala Ala Tyr Asp Ile Thr Gln Val Phe Pro Phe Ala Lys Lys Lys
 1 5 10 15

<210> 68
 <211> 16
 <212> PRT
 <213> Homo sapiens

<400> 68
 Gly Ala Ala Tyr Asp Ile Ser Gln Val Phe Pro Phe Ala Lys Lys Lys
 1 5 10 15

<210> 69
 <211> 278
 <212> PRT
 <213> Homo sapiens

<400> 69
 Ser Ile Ala Pro Ser Ser Leu Asp Pro Ser Asn Arg Lys Pro Leu Thr
 1 5 10 15
 Val Leu Asn Lys Gly Leu Glu Asn Pro Leu Pro Glu Arg Pro Arg Glu
 20 25 30
 Lys Glu Glu Pro Val Val Arg Glu Thr Gly Glu Val Val Asp Cys His
 35 40 45
 Leu Ser Asp Met Leu Gln Gln Leu His Ser Val Asn Ala Ser Lys Pro
 50 55 60
 Ser Glu Arg Gly Leu Val Arg Gln Glu Glu Ala Glu Asp Pro Ala Cys
 65 70 75 80
 Ile Pro Ile Phe Trp Val Ser Lys Trp Val Asp Tyr Ser Asp Lys Tyr
 85 90 95
 Gly Leu Gly Tyr Gln Leu Cys Asp Asn Ser Val Gly Val Leu Phe Asn
 100 105 110
 Asp Ser Thr Arg Leu Ile Leu Tyr Asn Asp Gly Asp Ser Leu Gln Tyr
 115 120 125
 Ile Glu Arg Asp Gly Thr Glu Ser Tyr Leu Thr Val Ser Ser His Pro
 130 135 140
 Asn Ser Leu Met Lys Lys Ile Thr Leu Leu Lys Tyr Phe Arg Asn Tyr

145					150				155				160
Met	Ser	Glu	His	Leu	Leu	Lys	Ala	Gly	Ala	Asn	Ile	Thr	Pro
				165					170				175
Gly	Asp	Glu	Leu	Ala	Arg	Leu	Pro	Tyr	Leu	Arg	Thr	Trp	Phe
			180					185					190
Arg	Ser	Ala	Ile	Ile	Leu	His	Leu	Ser	Asn	Gly	Ser	Val	Gln
		195					200					205	
Phe	Phe	Gln	Asp	His	Thr	Lys	Leu	Ile	Leu	Cys	Pro	Leu	Met
	210					215				220			
Val	Thr	Tyr	Ile	Asp	Glu	Lys	Arg	Asp	Phe	Arg	Thr	Tyr	Arg
225					230				235				240
Leu	Leu	Glu	Glu	Tyr	Gly	Cys	Cys	Lys	Glu	Leu	Ala	Ser	Arg
			245					250					255
Tyr	Ala	Arg	Thr	Met	Val	Asp	Lys	Leu	Leu	Ser	Ser	Arg	Ser
			260					265					270
Asn	Arg	Leu	Lys	Ala	Ser								
		275											

<210> 70
 <211> 282
 <212> PRT
 <213> Homo sapiens

<400> 70

Ser	Ile	Ala	Pro	Ser	Thr	Ile	Asp	Gln	Ser	Leu	Arg	Lys	Pro	Leu	Thr
1				5					10					15	
Ala	Ile	Asn	Lys	Gly	Gln	Asp	Ser	Pro	Leu	Val	Glu	Lys	Gln	Val	Ala
			20					25					30		
Pro	Ala	Lys	Glu	Glu	Glu	Met	Gln	Gln	Pro	Glu	Phe	Thr	Glu	Pro	Ala
		35				40					45				
Asp	Cys	Tyr	Leu	Ser	Glu	Met	Leu	Gln	Gln	Leu	Thr	Cys	Leu	Asn	Ala
	50					55					60				
Val	Lys	Pro	Ser	Glu	Arg	Ala	Leu	Ile	Arg	Gln	Glu	Glu	Ala	Glu	Asp
65					70				75						80
Pro	Ala	Ser	Ile	Pro	Ile	Phe	Trp	Ile	Ser	Lys	Trp	Val	Asp	Tyr	Ser
			85					90						95	
Asp	Lys	Tyr	Gly	Leu	Gly	Tyr	Gln	Leu	Cys	Asp	Asn	Ser	Val	Gly	Val
			100					105					110		
Leu	Phe	Asn	Asp	Ser	Thr	Arg	Leu	Ile	Met	Tyr	Asn	Asp	Gly	Asp	Ser
		115					120					125			
Leu	Gln	Tyr	Ile	Glu	Arg	Asn	Asn	Thr	Glu	Ser	Tyr	Leu	Asn	Val	Arg
	130					135					140				
Ser	Tyr	Pro	Thr	Thr	Leu	Thr	Lys	Lys	Ile	Thr	Leu	Leu	Lys	Tyr	Phe
145					150				155						160
Arg	Asn	Tyr	Met	Ser	Glu	His	Leu	Leu	Lys	Ala	Gly	Ala	Asn	Thr	Thr
			165						170					175	
Pro	Arg	Glu	Gly	Asp	Glu	Leu	Ala	Arg	Leu	Pro	Phe	Leu	Arg	Thr	Trp
			180					185					190		
Phe	Arg	Thr	Arg	Ser	Ala	Ile	Ile	Leu	His	Leu	Ser	Asn	Gly	Thr	Val
		195					200					205			
Gln	Ile	Asn	Phe	Phe	Gln	Asp	His	Thr	Lys	Ile	Ile	Leu	Cys	Pro	Leu
	210					215					220				
Met	Ala	Ala	Val	Ser	Tyr	Ile	Asp	Glu	Lys	Arg	Glu	Phe	Arg	Thr	Tyr
225					230					235					240
Lys	Leu	Ser	Leu	Ile	Gln	Glu	Phe	Gly	Cys	Cys	Lys	Glu	Leu	Ala	Ser
			245					250						255	
Arg	Leu	Arg	Tyr	Ala	Arg	Thr	Met	Val	Glu	Lys	Leu	Gln	Ser	Ser	Lys
			260					265					270		

Ser Ala Val Ala His Val Lys Ala Ser Ala
 275 280

<210> 71
 <211> 279
 <212> PRT
 <213> Homo sapiens

<400> 71
 Gly Ser Asn Asp Thr Ile Glu Asp Ser Met His Arg Lys Pro Leu Met
 1 5 10 15
 Glu Met Asn Gly Ile Arg Pro Asp Asp Thr Arg Leu Glu Ser Thr Phe
 20 25 30
 Leu Lys Ala Asn Leu His Asp Ala Ile Thr Ala Ser Ala Gln Val Cys
 35 40 45
 Arg His Ser Glu Asp Tyr Arg Ser Asp Ile Glu Ser Leu Tyr Gln Gln
 50 55 60
 Leu Thr Asn Leu Ile Asn Gly Lys Pro Arg Ile Leu Gln Gly Asn Leu
 65 70 75 80
 Gly Asp Glu Asn Thr Asp Pro Ala Ala Gln Pro Leu Phe Trp Ile Ser
 85 90 95
 Lys Trp Val Asp Tyr Ser Asp Lys Tyr Gly Phe Gly Tyr Gln Leu Cys
 100 105 110
 Asp Glu Gly Ile Gly Val Met Phe Asn Asp Thr Thr Lys Leu Ile Leu
 115 120 125
 Leu Pro Asn Gln Ile Asn Val His Phe Ile Asp Lys Asp Gly Lys Glu
 130 135 140
 Thr Tyr Met Thr Thr Thr Asp Tyr Cys Lys Ser Leu Asp Lys Lys Met
 145 150 155 160
 Lys Leu Leu Ser Tyr Phe Lys Arg Tyr Met Ile Glu His Leu Val Lys
 165 170 175
 Ala Gly Ala Asn Asn Val Asn Ile Glu Ser Asp Gln Ile Ser Arg Met
 180 185 190
 Pro His Leu His Ser Trp Phe Arg Thr Thr Cys Ala Val Val Met His
 195 200 205
 Leu Thr Asn Gly Ser Val Gln Leu Asn Phe Ser Asp His Met Lys Leu
 210 215 220
 Ile Leu Cys Pro Arg Met Ser Ala Ile Thr Tyr Met Asp Gln Glu Lys
 225 230 235 240
 Asn Phe Arg Thr Tyr Arg Phe Ser Thr Ile Val Glu Asn Gly Val Ser
 245 250 255
 Lys Asp Leu Tyr Gln Lys Ile Arg Tyr Ala Gln Glu Lys Leu Arg Lys
 260 265 270
 Met Leu Glu Lys Met Phe Thr
 275

<210> 72
 <211> 197
 <212> PRT
 <213> Homo sapiens

<400> 72
 Pro Ile Phe Trp Val Ser Lys Trp Val Asp Tyr Ser Asp Lys Tyr Gly
 1 5 10 15
 Leu Gly Tyr Gln Leu Cys Asp Asn Ser Val Gly Val Leu Phe Asn Asp
 20 25 30
 Ser Thr Arg Leu Ile Leu Tyr Asn Asp Gly Asp Ser Leu Gln Tyr Ile

<212> PRT
 <213> Homo sapiens

<400> 74
 Pro Ile Phe Trp Val Ser Lys Trp Val Asp Tyr Ser Asp Lys Tyr Gly
 1 5 10 15
 Leu Gly Tyr Gln Leu Cys Asp Asn Ser Val Gly Val Leu Phe Asn Asp
 20 25 30
 Ser Thr Arg Leu Ile Leu Tyr Asn Asp Gly Asp Ser Leu Gln Tyr Ile
 35 40 45
 Glu Arg Asp Gly Thr Glu Ser Tyr Leu Thr Val Ser Ser His Pro Asn
 50 55 60
 Ser Leu Met Lys Lys Ile Thr Leu Leu Asn Tyr Phe Arg Asn Tyr Met
 65 70 75 80
 Ser Glu His Leu Leu Lys Ala Gly Ala Asn Ile Thr Pro Arg Glu Gly
 85 90 95
 Asp Glu Leu Ala Arg Leu Pro Tyr Leu Arg Thr Trp Phe Arg Thr Arg
 100 105 110
 Ser Ala Ile Ile Leu His Leu Ser Asn Gly Thr Val Gln Ile Asn Phe
 115 120 125
 Phe Gln Asp His Thr Lys Leu Ile Arg Gly Pro Leu Met Ala Ala Val
 130 135 140
 Thr Tyr Ile Asn Glu Lys Arg Asp Phe Arg Thr Tyr Arg Leu Ser Leu
 145 150 155 160
 Leu Glu Glu Tyr Gly Cys Cys Lys Glu Leu Ala Ser Arg Leu Arg Tyr
 165 170 175
 Ala Arg Thr Met Val Asp Lys Leu Leu Ser Ser Arg Ser Ala Cys Asn
 180 185 190
 Arg Leu Lys Ala Ser
 195

<210> 75
 <211> 240
 <212> PRT
 <213> Homo sapiens

<400> 75
 Pro Val Phe Trp Ile Ser Lys Trp Val Asp Tyr Ser Asp Lys Tyr Gly
 1 5 10 15
 Ile Gly Tyr Gln Leu Cys Asp Asn Ser Val Gly Val Leu Phe Asn Asp
 20 25 30
 Asn Ser Arg Ile Met Leu Asp Gln Ala Gly Asn Glu Leu Thr Tyr Ile
 35 40 45
 Glu Lys Ser Asn Lys Glu His Tyr Phe Ser Met His Ser Gly Glu Met
 50 55 60
 Pro Gly Leu Leu Asn Lys Lys Val Thr Leu Leu Lys Tyr Phe Arg Ser
 65 70 75 80
 Tyr Met Asn Asp His Leu Val Lys Ala Gly Glu Gly Ser Glu Gln Arg
 85 90 95
 Ala Gly Asp Asp Leu Ala Arg Leu Pro Thr Leu Arg Val Trp Phe Arg
 100 105 110
 Thr Lys Ser Ala Ile Val Leu His Leu Ser Asn Gly Thr Val Gln Ile
 115 120 125
 Asn Phe Phe Asn Asp His Val Lys Met Met Met Cys Pro Leu Met Gln
 130 135 140
 Ala Val Thr Phe Ile Asp Gln Asn Lys Arg Met Leu Thr Tyr Lys Leu
 145 150 155 160
 Asn Asn Leu Gln Arg Asn Gly Cys Pro Glu Lys Phe Leu His Arg Leu

				165					170					175			
Lys	Tyr	Ala	Lys	Thr	Met	Ile	Glu	Arg	Leu	Met	Ser	Asp	Ala	Asn	Val		
			180					185					190				
Val	Ser	Gln	Asn	Pro	Ala	Arg	Gln	Pro	Asp	Met	Pro	Arg	Ser	Met	Ala		
		195					200					205					
Ala	Ala	Arg	Ser	Ala	Ser	Ala	Gly	Ser	Arg	Gly	Pro	Asn	Gln	Ala	Ala		
	210					215					220						
Ser	His	Leu	Pro	Gln	Ser	Ala	Ser	Gly	Ser	Asn	Ile	His	Pro	Arg	Arg		
225					230					235					240		

<210> 76
 <211> 189
 <212> PRT
 <213> Homo sapiens

<400> 76

Pro	Leu	Phe	Trp	Ile	Ser	Lys	Trp	Val	Asp	Tyr	Ser	Asp	Lys	Tyr	Gly		
1				5					10					15			
Phe	Gly	Tyr	Gln	Leu	Cys	Asp	Glu	Gly	Ile	Gly	Val	Met	Phe	Asn	Asp		
			20					25					30				
Thr	Thr	Lys	Leu	Ile	Leu	Leu	Pro	Asn	Gln	Ile	Asn	Val	His	Phe	Ile		
		35					40					45					
Asp	Lys	Asp	Gly	Lys	Glu	Thr	Tyr	Met	Thr	Thr	Thr	Asp	Tyr	Cys	Lys		
	50					55					60						
Ser	Leu	Asp	Lys	Lys	Met	Lys	Leu	Leu	Ser	Tyr	Phe	Lys	Arg	Tyr	Met		
65					70					75					80		
Ile	Glu	His	Leu	Val	Lys	Ala	Gly	Ala	Asn	Asn	Val	Asn	Ile	Glu	Ser		
			85						90				95				
Asp	Gln	Ile	Ser	Arg	Met	Pro	His	Leu	His	Ser	Trp	Phe	Arg	Thr	Thr		
			100					105					110				
Cys	Ala	Val	Val	Met	His	Leu	Thr	Asn	Gly	Ser	Val	Gln	Leu	Asn	Phe		
		115					120					125					
Ser	Asp	His	Met	Lys	Leu	Ile	Leu	Cys	Pro	Arg	Met	Ser	Ala	Ile	Thr		
	130					135					140						
Tyr	Met	Asp	Gln	Glu	Lys	Asn	Phe	Arg	Thr	Tyr	Arg	Phe	Ser	Thr	Ile		
145					150					155					160		
Val	Glu	Asn	Gly	Val	Ser	Lys	Asp	Leu	Tyr	Gln	Lys	Ile	Arg	Tyr	Ala		
			165					170						175			
Gln	Glu	Lys	Leu	Arg	Lys	Met	Leu	Glu	Lys	Met	Phe	Thr					
		180						185									

<210> 77
 <211> 198
 <212> PRT
 <213> Homo sapiens

<400> 77

Pro	Ile	Phe	Trp	Ile	Ser	Lys	Trp	Val	Asp	Tyr	Ser	Asp	Lys	Tyr	Gly		
1				5					10					15			
Leu	Gly	Tyr	Gln	Leu	Cys	Asp	Asn	Ser	Val	Gly	Val	Leu	Phe	Asn	Asp		
			20				25						30				
Ser	Thr	Arg	Leu	Ile	Met	Tyr	Asn	Asp	Gly	Asp	Ser	Leu	Gln	Tyr	Ile		
		35					40					45					
Glu	Arg	Asn	Asn	Thr	Glu	Ser	Tyr	Leu	Asn	Val	Arg	Ser	Tyr	Pro	Thr		
	50					55					60						
Thr	Leu	Thr	Lys	Lys	Ile	Thr	Leu	Leu	Lys	Tyr	Phe	Arg	Asn	Tyr	Met		
65					70					75					80		

Ser	Glu	His	Leu	Leu	Lys	Ala	Gly	Ala	Asn	Thr	Thr	Pro	Arg	Glu	Gly
				85					90					95	
Asp	Glu	Leu	Ala	Arg	Leu	Pro	Phe	Leu	Arg	Thr	Trp	Phe	Arg	Thr	Arg
			100					105					110		
Ser	Ala	Ile	Ile	Leu	His	Leu	Ser	Asn	Gly	Thr	Val	Gln	Ile	Asn	Phe
		115					120					125			
Phe	Gln	Asp	His	Thr	Lys	Ile	Ile	Leu	Cys	Pro	Leu	Met	Ala	Ala	Val
	130					135					140				
Ser	Tyr	Ile	Asp	Glu	Lys	Arg	Glu	Phe	Arg	Thr	Tyr	Lys	Leu	Ser	Leu
145					150					155					160
Ile	Gln	Glu	Phe	Gly	Cys	Cys	Lys	Glu	Leu	Ala	Ser	Arg	Leu	Arg	Tyr
				165					170					175	
Ala	Arg	Thr	Met	Val	Glu	Lys	Leu	Gln	Ser	Ser	Lys	Ser	Ala	Val	Ala
			180					185					190		
His	Val	Lys	Ala	Ser	Ala										
			195												

<210> 78
 <211> 186
 <212> PRT
 <213> Homo sapiens

<400> 78
Phe Phe Gln Trp Val Thr Lys Trp Val Asp Tyr Ser Asn Lys Tyr Gly
1 5 10 15
Phe Gly Tyr Gln Leu Ser Asp His Thr Val Gly Val Leu Phe Asn Asn
20 25 30
Gly Ala His Met Ser Leu Leu Pro Asp Lys Lys Thr Val His Tyr Tyr
35 40 45
Ala Glu Leu Gly Gln Cys Ser Val Phe Pro Ala Thr Asp Ala Pro Glu
50 55 60
Gln Phe Ile Ser Gln Val Thr Val Leu Lys Tyr Phe Ser His Tyr Met
65 70 75 80
Glu Glu Asn Leu Met Asp Gly Gly Asp Leu Pro Ser Val Thr Asp Ile
85 90 95
Arg Arg Pro Arg Leu Tyr Leu Leu Gln Trp Leu Lys Ser Asp Lys Ala
100 105 110
Leu Met Met Leu Phe Asn Asp Gly Thr Phe Gln Val Asn Phe Tyr His
115 120 125
Asp His Thr Lys Ile Ile Ile Cys Ser Gln Asn Glu Glu Tyr Leu Leu
130 135 140
Thr Tyr Ile Asn Glu Asp Arg Ile Ser Thr Thr Phe Arg Leu Thr Thr
145 150 155 160
Leu Leu Met Ser Gly Cys Ser Ser Glu Leu Lys Asn Arg Met Glu Tyr
165 170 175
Ala Leu Asn Met Leu Leu Gln Arg Cys Asn
180 185

<210> 79
 <211> 186
 <212> PRT
 <213> Homo sapiens

<400> 79
Ser Phe Gln Trp Val Thr Lys Trp Val Asp Tyr Ser Asn Lys Tyr Gly
1 5 10 15
Phe Gly Tyr Gln Leu Ser Asp His Thr Val Gly Val Leu Phe Asn Asn

<400> 81
Pro Ile Phe Trp Val Ser Gln Trp Val His Phe Pro Asn His Gly Ile
1 5 10 15
Gly Tyr Arg Leu Cys Glu Asn Ser Ser Gly Met Leu Phe Asn Asp Asn
20 25 30
Thr Gln Met Lys Val Asn Ser Ala Gly Asn Gln Leu Thr Phe Val Asp
35 40 45
Glu Asn Asn Thr Glu Gln Phe Tyr Thr Met Asn Asp Gln Val Pro Met
50 55 60
Asn Leu Gln Thr Lys Ile Asn Ile Phe Ser Asn Val Gln Ser Tyr Met
65 70 75 80
Asn Thr His Leu Glu Ala Asp Thr His Leu Glu Ala Glu Asp Gln Cys
85 90 95
Val Asn Lys Val Pro Pro Leu Arg Asn Phe Ala Arg Leu Pro Thr Ile
100 105 110
Gln Asn Trp Phe Glu Thr Lys Ser Ala Val Ile Phe His Leu Ser Asn
115 120 125
Gly Thr Val Gln Ile Asn Phe Leu Asp His Val Lys Met Val Leu Cys
130 135 140
Pro Leu Leu Lys Ser Val Thr Phe Ile Glu Glu Asn Lys Arg Val Ser
145 150 155 160
Thr Phe Thr Phe Ala Asn Ile Leu Thr Asn Ser Cys Pro Lys Lys Tyr
165 170 175
Leu Ser Arg Ile Glu Tyr Ala Gln Ala Lys Ile Lys Leu Leu Arg Pro
180 185 190
Thr Asn Asn Gln Glu His Val Val Tyr Val Asp Ser Pro Cys Arg Pro
195 200 205
Thr Thr Ser Asn Thr Ala His Gly Ala Pro Leu Ala Ser Ser Arg Tyr
210 215 220
Leu Ala
225

<210> 82
<211> 189
<212> PRT
<213> Homo sapiens

<400> 82
Ser Phe His Trp Val Thr Lys Trp Val Asp Tyr Ser Asn Lys Tyr Gly
1 5 10 15
Phe Gly Tyr Gln Leu Ser Asp His Thr Val Gly Val Leu Phe Asn Asn
20 25 30
Gly Ala His Met Ser Phe Leu Pro Asp Lys Lys Thr Val His Tyr Tyr
35 40 45
Ala Glu Leu Gly Gln Cys Ser Val Phe Pro Ala Thr Glu Ala Pro Glu
50 55 60
Gln Phe Ile Ser Gln Val Thr Val Leu Lys Tyr Phe Ser His Tyr Met
65 70 75 80
Glu Glu Asn Leu Met Asp Gly Gly Asp Leu Pro Ser Val Thr Asp Val
85 90 95
Cys Arg Pro Arg Leu Tyr Leu Leu Gln Trp Leu Lys Ser Asp Lys Ala
100 105 110
Leu Met Met Leu Phe Asn Asp Gly Thr Phe Gln Val Asn Phe Tyr His
115 120 125
Asp His Thr Lys Ile Ile Ile Ala Asn Gln Asn Asp Glu Tyr Val Leu
130 135 140
Thr Tyr Ile Asn Glu Asp Arg Met Ser Thr Thr Phe His Leu Ser Thr
145 150 155 160

Leu	Leu	Ile	Ser	Gly	Gly	Ser	Ser	Asp	Leu	Lys	Asn	Arg	Met	Glu	Tyr
				165					170					175	
Ala	Leu	Asn	Met	Leu	Leu	Gln	Arg	Cys	Asn	Glu	Val	Ala			
			180					185							

<210> 83
 <211> 187
 <212> PRT
 <213> Homo sapiens

<400> 83

Pro	Leu	Val	Trp	Phe	Ser	Glu	Trp	Val	Gly	Phe	Ser	Asn	Lys	Phe	Gly
1				5					10					15	
Phe	Gly	Tyr	Gln	Leu	Ser	Ser	Arg	Arg	Val	Ala	Val	Leu	Phe	Asn	Asp
			20					25					30		
Gly	Thr	His	Met	Ala	Leu	Ser	Ala	Asn	Arg	Lys	Thr	Val	His	Tyr	Asn
		35					40					45			
Pro	Thr	Ser	Thr	Lys	His	Phe	Ser	Phe	Ser	Val	Gly	Ala	Val	Arg	Arg
	50				55						60				
Ala	Leu	Gln	Pro	Gln	Leu	Gly	Ile	Leu	Arg	Tyr	Phe	Ala	Ser	Tyr	Met
65				70					75						80
Glu	Gln	His	Leu	Met	Lys	Gly	Gly	Asp	Leu	Pro	Ser	Val	Glu	Glu	Val
			85						90					95	
Glu	Val	Pro	Ala	Pro	Pro	Leu	Leu	Leu	Gln	Trp	Val	Lys	Thr	Asp	Gln
			100					105					110		
Ala	Leu	Leu	Met	Leu	Phe	Ser	Asp	Gly	Thr	Val	Gln	Val	Asn	Phe	Tyr
		115					120					125			
Gly	Asp	His	Thr	Lys	Leu	Ile	Leu	Ser	Gly	Trp	Glu	Pro	Leu	Leu	Val
	130				135						140				
Thr	Phe	Val	Ala	Arg	Asn	Arg	Ser	Ala	Cys	Thr	Tyr	Leu	Ala	Ser	His
145					150					155					160
Leu	Arg	Gln	Leu	Gly	Cys	Ser	Pro	Asp	Leu	Arg	Gln	Arg	Leu	Arg	Tyr
			165						170						175
Ala	Leu	Arg	Leu	Leu	Arg	Asp	Arg	Ser	Pro	Ala					
			180					185							

<210> 84
 <211> 187
 <212> PRT
 <213> Homo sapiens

<400> 84

Pro	Leu	Val	Trp	Val	Ser	Lys	Trp	Val	Asp	Tyr	Ser	Asn	Lys	Phe	Gly
1				5					10					15	
Phe	Gly	Tyr	Gln	Leu	Ser	Ser	Arg	Arg	Val	Ala	Val	Leu	Phe	Asn	Asp
			20					25					30		
Gly	Thr	His	Met	Ala	Leu	Ser	Ala	Asn	Arg	Lys	Thr	Val	His	Tyr	Asn
		35					40					45			
Pro	Thr	Ser	Thr	Lys	His	Phe	Ser	Phe	Ser	Met	Gly	Ser	Val	Pro	Arg
	50				55					60					
Ala	Leu	Gln	Pro	Gln	Leu	Gly	Ile	Leu	Arg	Tyr	Phe	Ala	Ser	Tyr	Met
65				70					75						80
Glu	Gln	His	Leu	Met	Lys	Gly	Gly	Asp	Leu	Pro	Ser	Val	Glu	Glu	Ala
			85						90					95	
Glu	Val	Pro	Ala	Pro	Pro	Leu	Leu	Leu	Gln	Trp	Val	Lys	Thr	Asp	Gln
			100					105					110		
Ala	Leu	Leu	Met	Leu	Phe	Ser	Asp	Gly	Thr	Val	Gln	Val	Asn	Phe	Tyr

	115					120				125									
Gly	Asp	His	Thr	Lys	Leu	Ile	Leu	Ser	Gly	Trp	Glu	Pro	Leu	Leu	Val				
	130					135					140								
Thr	Phe	Val	Ala	Arg	Asn	Arg	Ser	Ala	Cys	Thr	Tyr	Leu	Ala	Ser	His				
145					150					155					160				
Leu	Arg	Gln	Leu	Gly	Cys	Ser	Pro	Asp	Leu	Arg	Gln	Arg	Leu	Arg	Tyr				
				165					170						175				
Ala	Leu	Arg	Leu	Leu	Arg	Asp	Gln	Ser	Pro	Ala									
			180					185											

<210> 85
 <211> 186
 <212> PRT
 <213> Homo sapiens

<400> 85

Pro	Leu	Val	Trp	Val	Ser	Lys	Trp	Val	Asp	Tyr	Ser	Asn	Lys	Phe	Gly				
1				5					10					15					
Phe	Gly	Tyr	Gln	Leu	Ser	Ser	Arg	Arg	Val	Ala	Val	Leu	Phe	Asn	Asp				
			20					25					30						
Gly	Thr	His	Met	Ala	Leu	Ser	Ala	Asn	Arg	Lys	Thr	Val	His	Tyr	Asn				
		35					40					45							
Pro	Thr	Ser	Thr	Lys	His	Phe	Ser	Phe	Ser	Val	Gly	Ser	Val	Pro	Arg				
	50					55					60								
Ala	Leu	Arg	Pro	Gln	Leu	Gly	Ile	Leu	Arg	Tyr	Phe	Ala	Ser	Tyr	Met				
65					70				75					80					
Glu	Gln	His	Leu	Met	Lys	Gly	Gly	Asp	Leu	Pro	Ser	Val	Glu	Glu	Val				
				85				90						95					
Glu	Val	Pro	Ala	Pro	Pro	Leu	Leu	Leu	Gln	Trp	Val	Lys	Thr	Asp	Gln				
			100					105					110						
Ala	Leu	Leu	Met	Leu	Phe	Ser	Asp	Gly	Thr	Val	Gln	Val	Asn	Phe	Tyr				
		115					120					125							
Gly	Asp	His	Thr	Lys	Leu	Ile	Leu	Ser	Gly	Trp	Glu	Pro	Leu	Leu	Val				
	130					135					140								
Thr	Phe	Val	Ala	Arg	Asn	Arg	Ser	Ala	Cys	Thr	Tyr	Leu	Ala	Ser	His				
145					150				155					160					
Leu	Arg	Gln	Leu	Gly	Cys	Ser	Pro	Asp	Leu	Arg	Gln	Arg	Leu	Arg	Tyr				
				165					170					175					
Ala	Leu	Arg	Leu	Leu	Arg	Asp	Gln	Ser	Pro										
			180					185											

<210> 86
 <211> 187
 <212> PRT
 <213> Homo sapiens

<400> 86

His	Phe	Val	Trp	Val	Ser	Lys	Trp	Val	Asp	Tyr	Ser	Asn	Lys	Tyr	Gly				
1				5					10					15					
Phe	Gly	Tyr	Gln	Leu	Ser	Asn	Arg	Ser	Ile	Gly	Val	Leu	Phe	Asn	Ser				
			20					25					30						
Gly	Thr	His	Met	Val	Phe	Pro	Ala	His	Arg	Arg	His	Val	His	Tyr	Asn				
		35					40					45							
Leu	Thr	Asn	Ser	Arg	His	Phe	Val	Phe	Pro	Thr	Ser	Thr	Val	Pro	Glu				
	50					55					60								
Gln	Leu	Gln	Gly	Gln	Met	Ser	Ile	Leu	Gln	Tyr	Phe	Ala	Thr	Tyr	Met				
65					70				75					80					

Glu	Lys	Asn	Leu	Met	Lys	Gly	Gly	Asp	Leu	Pro	Cys	His	Glu	Glu	Gly
				85					90					95	
Ser	Gln	Ala	Pro	Leu	Leu	Leu	Leu	Gln	Trp	Val	Lys	Thr	Glu	His	Ala
			100					105					110		
Leu	Leu	Met	Leu	Phe	Ser	Asn	Gly	Thr	Leu	Gln	Val	Asn	Phe	Tyr	Asn
		115					120					125			
Asp	His	Thr	Lys	Ile	Ile	Leu	Cys	Lys	Pro	Gln	Asp	Ala	Tyr	Leu	Leu
		130				135					140				
Thr	Tyr	Ile	Asn	Arg	Asp	Arg	Asn	Ser	Gln	Thr	Phe	Leu	Leu	Ser	Thr
					150					155					160
Leu	Ala	Gln	Thr	Gly	Cys	Asn	Ser	Glu	Met	Tyr	His	Arg	Leu	Lys	Tyr
				165					170					175	
Thr	Val	Lys	Leu	Leu	Gln	Gln	Lys	Ala	Glu	Ser					
			180					185							

<210> 87
 <211> 99
 <212> PRT
 <213> Homo sapiens

<400> 87

Pro	Ile	Phe	Trp	Val	Ser	Lys	Trp	Val	Asp	Tyr	Ser	Asp	Lys	Tyr	Gly
1				5					10					15	
Leu	Gly	Tyr	Gln	Leu	Cys	Asp	Asn	Ser	Val	Gly	Val	Leu	Phe	Asn	Asp
			20					25					30		
Ser	Thr	Arg	Leu	Ile	Leu	Tyr	Asn	Asp	Gly	Asp	Ser	Leu	Gln	Tyr	Ile
		35					40					45			
Glu	Arg	Asp	Gly	Thr	Glu	Ser	Tyr	Leu	Thr	Val	Ser	Ser	His	Pro	Asn
	50					55					60				
Ser	Leu	Met	Lys	Lys	Ile	Thr	Leu	Leu	Lys	Tyr	Phe	Arg	Asn	Tyr	Met
65					70					75					80
Ser	Glu	His	Leu	Leu	Lys	Ala	Gly	Ala	Asn	Ile	Thr	Pro	Arg	Glu	Gly
			85						90					95	

Asp Glu Leu

<210> 88
 <211> 98
 <212> PRT
 <213> Homo sapiens

<400> 88

Ala	Arg	Leu	Pro	Tyr	Leu	Arg	Thr	Trp	Phe	Arg	Thr	Arg	Ser	Ala	Ile
1				5					10					15	
Ile	Leu	His	Leu	Ser	Asn	Gly	Ser	Val	Gln	Ile	Asn	Phe	Phe	Gln	Asp
			20					25					30		
His	Thr	Lys	Leu	Ile	Leu	Cys	Pro	Leu	Met	Ala	Ala	Val	Thr	Tyr	Ile
		35					40					45			
Asp	Glu	Lys	Arg	Asp	Phe	Arg	Thr	Tyr	Arg	Leu	Ser	Leu	Leu	Glu	Glu
	50					55					60				
Tyr	Gly	Cys	Cys	Lys	Glu	Leu	Ala	Ser	Arg	Leu	Arg	Tyr	Ala	Arg	Thr
65					70					75					80
Met	Val	Asp	Lys	Leu	Leu	Ser	Ser	Arg	Ser	Ala	Ser	Asn	Arg	Leu	Lys
				85					90					95	

Ala Ser

<210> 89
 <211> 87
 <212> PRT
 <213> Homo sapiens

<400> 89
 Ser Ala Gln Leu Leu Lys Ser Val Phe Val Lys Asn Val Gly Trp Ala
 1 5 10 15
 Thr Gln Leu Thr Ser Gly Ala Val Trp Val Gln Phe Asn Asp Gly Ser
 20 25 30
 Gln Leu Val Val Gln Ala Gly Val Ser Ser Ile Ser Tyr Thr Ser Pro
 35 40 45
 Asp Gly Gln Thr Thr Arg Tyr Gly Glu Asn Glu Lys Leu Pro Glu Tyr
 50 55 60
 Ile Lys Gln Lys Leu Gln Cys Leu Ser Ser Ile Leu Leu Met Phe Ser
 65 70 75 80
 Asn Pro Thr Pro Asn Phe Gln
 85

<210> 90
 <211> 6270
 <212> RNA
 <213> Homo sapiens

<400> 90
 atggaggaca cccaggctat tgactgggat gttgaagaag aggaggagac agagcaatcc 60
 agtgaatcct tgaggtgtaa cgtggagcca gtagggcggc tacatatctt tagtgggtgcc 120
 catggaccag aaaaagattt cccactacac ctcggaaga atgtggtagg ccgaatgcct 180
 gactgctctg tggccctgcc ctttccatct atctccaaac aacatgcaga gattgaaatc 240
 ttagcctggg acaaggcacc tatcctccga gactgtggga gccttaatgg tactcaaatc 300
 ctgagacctc ctaaggtttt gagccctggg gtgagtcacc gtctgaggga ccaggaattg 360
 attctctttg ctgacttgct ctgccagtac catcgctgg atgtctctct gccctttgtc 420
 tccccggggc ctctgacagt agaagagaca cccagagtac agggagaaaac tcaacccag 480
 aggtctctgt tggctgagga ctcgaggag gaagtagatt ttctttctga aaggcgtatg 540
 gtaaaaaaat caaggaccac atcttctct gtgatagttc cagagagtga tgaagagggg 600
 cattccccgg tctggggcgg ccttgggccc cttttgcct tcaatttgaa cagtgcacac 660
 gatgtggaag aaggctcagc accagccaca gaggaggcct cctcagctgc cagaagaggt 720
 gccactgtag aggcaaagca gtctgaagct gaagttgtaa ctgaaatcca gcttgaaaag 780
 gatcagcctt tagtgaagga gagggacaat gatacaaaa tcaagagggg tgcagggaat 840
 ggggtgggtc cagctggggg gattctggag agggagccaac ctctgggaga ggacagtgc 900
 acagatgtgg atgatgcag caggcctcct ggaaggccag ctgaggtcca tttggaaagg 960
 gctcagcctt ttggcttcat cgacagcgac actgatgcgg aagaagagag gatcccagca 1020
 acccagttg tcatctctat gaagaagagg aagatcttcc atggagtagg tacaaggggt 1080
 cctggagcac caggcctggc ccatctgcag gagagccagg ctggtagtga tacagatgtg 1140
 gaagaaggca agggcccaca ggctgtccct ctggagaaaa gccaaagctt catggttatc 1200
 aacagcgata cagatgacga ggaagaagtc tcagcagcgc tgactttggc acatctgaaa 1260
 gagagccagc ctgctatatg gaacagagat gcagaagagg acatgcccc acgtgtgggtc 1320
 cttctgcagc gaagccaaac caccactgag agagacagt acacagacgt ggaggaggaa 1380
 gagctccccc tggaaaatag agaagctgtc ctcaaggatc acacaaagat tagagcctt 1440
 gttagagcac attcagaaaa ggaccaacct ctttttgggg acagtgatga cagtgtggaa 1500
 gcagataaga gctcacctgg gatccacctg gagagaagcc aagcctccac cacagtggac 1560
 atcaacacac aagtggagaa ggaagtcccg ccagggtcag ccattatgca tataaagaag 1620
 catcaggtgt ctgtggaggg gacaaatcaa acagatgtga aagcagttgg gggaccagca 1680
 aagctgcttg tggatatctc agaggaagcc tggcctctgc atggggactg tgaaacagat 1740
 gcagaggagg gcacctccct aacagcctca gtagttgcag atgtaagaaa gagccagctt 1800
 ccagcagaag gggatgctgg ggcagagctg gctgcagctg ttcttaagca ggagagagct 1860
 catgaggtgg gggcccaggg tgggcccagc gtggcacaag tggagcagga cctccctatc 1920
 tcaagagaga acctcacaga tctgggtggtg gacacagaca ctctagggga atccaccag 1980

ccacagagag	agggagccca	ggtccccaca	ggaagggaga	gagaacaaca	tgtgggtggg	2040
accaaggact	ctgaagacaa	ctatggtgat	tctgaagatc	tggacctaca	agctacccag	2100
tgctttctgg	agaatcaggg	cctggaagca	gtccagagca	tggaggatga	acctacccag	2160
gccttcatgt	tgactccacc	ccaagagctt	ggcccttccc	attgcagctt	ccagacaaca	2220
ggtaccctag	atgaaccatg	ggaggtcctg	gctacacagc	cattctgtct	gagagagtct	2280
gaggactctg	agacccagcc	ttttgacacg	caccttgagg	cctatggacc	ttgcctgtct	2340
ccacctaggg	caataccagg	agaccaacat	ccagagagcc	cagttcacac	agagccaatg	2400
gggattcaag	gcagagggag	gcagactgtg	gataaagtca	tgggtatacc	aaaagaaaca	2460
gcagagaggg	tgggcccctga	gagagggcca	ttggagagag	aaactgagaa	actgctacca	2520
gaaagacaga	cagatgtgac	aggagaggaa	gaattaacca	aggggaaaca	ggacagagaa	2580
caaaaacagt	tgttagctag	agacacccag	agacaagaat	ctgacaaaaa	tggggaaagt	2640
gcaagtccctg	aaagagatag	ggagagtttg	aaggtagaaa	ttgagacatc	tgaggaaata	2700
caagagaaac	aagtacagaa	gcagaccctt	ccaagcaaa	catttgagag	agaagtagag	2760
agaccagtag	caaacagaga	gtgcatcca	gccgagttag	aagagaaggt	gccccaaagt	2820
atcctggaga	gagatacaca	gagaggggag	ccagagggag	ggagccagga	ccagaaaggg	2880
caggcctcca	gccccaaccc	agagcctggg	gtggggcg	gggaccttcc	gggacctacc	2940
tcagcccccg	taccttctgg	gagccagtca	ggtggaagg	gatccccagt	gagccccagg	3000
aggcatcaga	aaggcctcct	gaattgcaag	atgccacctg	ctgagaaggc	ttccaggatc	3060
agagctgctg	agaaggtttc	caggggcgat	caggaatctc	cagatgcttg	tctgcctcct	3120
gcagtacctg	aagccccagc	cccccccaa	aagcccccta	actctcagag	ccagaaacat	3180
cttgcaacctc	cgcccccttct	ttctccccct	ttaccttcta	tcaagccaac	cgttcgtaag	3240
accaggcaag	atggggagtca	ggaagctcca	gaggctccct	tgtcctcaga	gctggagcct	3300
ttccacccaa	agcctaaaaat	tagaactcgg	aagtccctcca	gaatgacacc	ctttccagct	3360
acctctgctg	ccccctgagcc	ccacccttcc	acctccacag	cccagccagt	cactcccaag	3420
cccacatctc	agggccactag	gagcaggaca	aataggctct	ctgtcaagac	ccctgaacca	3480
gttgtcccca	cagccccctga	gctccagcct	tccacctcca	cagaccagcc	tgctacctct	3540
gagcccacat	ctcaggttac	taggggaaga	aaaagtagat	cctctgtcaa	gacccctgaa	3600
acagttgtgc	ccacagccct	tgagctccag	ccttccacct	ccaccgaccg	acctgtcacc	3660
tctgaacca	cctctcaggc	tactagggga	agaaaaata	gatcctctgt	caagaccctt	3720
gaaccagttg	tccccacagc	ccctgagctc	cagccttcca	cctccacaga	ccagcctgtc	3780
acttctgagc	ccacatatca	ggctactagg	ggaagaaaaa	atagatcctc	tgtcaagacc	3840
cctgaaccag	ttgtgcccac	agcccctgag	ctccggcctt	ccacctccac	agaccgacct	3900
gtcaccccca	agcccacatc	tcggaccact	aggagcagga	caaatatgtc	ctctgtcaag	3960
accctgaaa	cagttgtccc	cacagcccct	gagctccaga	tttccacctc	cacagaccaa	4020
cctgtcaccc	ctaagcccac	atctcggacc	actaggagca	ggacaaatat	gtcctctgtg	4080
aagaaccctg	aatcaactgt	ccctatagcc	cctgagctcc	caccttccac	ctccacagag	4140
cagcctgtca	ccccctgagcc	cacatctcgg	gctactaggg	gaagaaaaaa	tagatcctct	4200
ggcaagaccc	ctgaaacact	tgtccccaca	gcccctaagc	tcgagccttc	cacttccaca	4260
gaccaacctg	tcaactcctga	gcccacatct	caggccacca	ggggcaggac	aaataggtcc	4320
tctgtgaaga	cccctgaaac	agttgtcccc	acagcccctg	agctccagcc	ttccacctcc	4380
acagaccagc	ctgttacccc	tgagcctaag	tctcaggcta	ctaggggag	aacagataga	4440
tcctctgtca	agactcctga	aacagttgtc	cccacagccc	ctgagctaca	ggcttccgcc	4500
tccacagacc	agcctgtcac	ctctgagccc	acatctcggg	ccactagggg	aagaaaaaat	4560
cggtcctctg	tcaagacccc	tgaaacagtt	gtgcccgcag	cccctgagct	ccagcctccc	4620
acctccacag	accgacctgt	cacccttgag	cccacatctc	gggccaactag	gggcaggaca	4680
aataggctct	ctgtcaagac	ccctgaatca	attgtcccta	tagcccctga	gcttcagcct	4740
tccacctcca	gaaaccagct	tgtcacccct	gagccacat	ctcggggccac	taggtgcagg	4800
acaaaataggt	cctctgtcaa	gacccctgag	ccagttgtcc	ccacagcccc	tgagccccat	4860
cctaccacct	ccacagacca	gcctgtcacc	cccaagctca	catctagggc	cactaggaga	4920
aagacaaaata	ggtcctctgt	caagactccc	aaaccagttg	aaccagcagc	ctctgatctt	4980
gagcctttta	ccccacaga	ccagtccgtc	accctgagg	ccatagctca	gggtggtcag	5040
agcaaaacac	tgaggtcttc	cacagtaaga	gctatgccgg	ttcctaccac	ccctgaattc	5100
caatctcctg	tcaccacaga	ccagcctatt	tcccctgagc	ctattactca	accagtttgc	5160
atcaagaggg	agagagccgc	tgggaaccct	ggctccctcg	cagctcccat	tgaccataag	5220
ccttgctctg	cacccttgga	acctaaatcc	caggcctcaa	ggaaccaaag	atggggagca	5280
gtgagagcag	ctgaatccct	tacagccatt	cctgagcctg	cctctcccca	gcttcttgag	5340
acaccaattc	atgcctccca	gatccaaaag	gtggaaccag	caggtagatc	taggttcacc	5400
ccggagctcc	agcctaaggc	ctctcaaagc	cgcaagaggt	ctttagctac	catggattca	5460
ccaccacatc	aaaaacagcc	ccaaagaggg	gaagtctccc	agaagacagt	gattatcaag	5520

```

gaagaggaag aagatactgc agagaagcca ggggaaggaag aggatgtcgt gactccaaaa 5580
ccaggcaaga gaaagagaga ccaggcagag gaggagccca acagaatacc aagccgcagc 5640
ctccgacgga ccaaacttaa ccaagaatca acagccccc aagtgtcttt cacaggagtg 5700
gtggatgctc ggggagagcg ggctgtgctg gactggggg gaagtctggc tggttcagcg 5760
gcagaggctt cccacctggt cactgatcgc atccgcccga cagtcaagtt cctgtgtgcc 5820
ctggggcggg gaatcccat tctgtccctg gactggctgc atcagtcccg caaggctggt 5880
ttcttcttac ccccgatga atatgtggtg accgaccctg agcaagagaa gaactttggc 5940
tttagccttc aagacgcact gagcagggt cgaggcgaa ggctgctaga gggctatgag 6000
atctatgtga cccctggagt ccagccacca ccacctcaga tgggagagat tattagctgc 6060
tgtggaggca catacctacc cagcatgcct cggctcctata agcctcagag agttgtgatc 6120
acatgccctc aggacttccc tcattgctcc attccactac ggggtgggct gccctcctc 6180
tcgcctgagt tctgtctgac tggagtgtg aagcaggaag ccaagccaga ggcctttgtc 6240
ctctcccctt tggagatgtc atccacctga 6270

```

```

<210> 91
<211> 1972
<212> PRT
<213> Homo sapiens

```

```

<400> 91
Met Asp Pro Thr Gly Ser Gln Leu Asp Ser Asp Phe Ser Gln Gln Asp
1      5      10      15
Thr Pro Cys Leu Ile Ile Glu Asp Ser Gln Pro Glu Ser Gln Val Leu
20     25     30
Glu Asp Asp Ser Gly Ser His Phe Ser Met Leu Ser Arg His Leu Pro
35     40     45
Asn Leu Gln Thr His Lys Glu Asn Pro Val Leu Asp Val Val Ser Asn
50     55     60
Pro Glu Gln Thr Ala Gly Glu Glu Arg Gly Asp Gly Asn Ser Gly Phe
65     70     75     80
Asn Glu His Leu Lys Glu Asn Lys Val Ala Asp Pro Val Asp Ser Ser
85     90     95
Asn Leu Asp Thr Cys Gly Ser Ile Ser Gln Val Ile Glu Gln Leu Pro
100    105    110
Gln Pro Asn Arg Thr Ser Ser Val Leu Gly Met Ser Val Glu Ser Ala
115    120    125
Pro Ala Val Glu Glu Glu Lys Gly Glu Glu Leu Glu Gln Lys Glu Lys
130    135    140
Glu Lys Glu Glu Asp Thr Ser Gly Asn Thr Thr His Ser Leu Gly Ala
145    150    155    160
Glu Asp Thr Ala Ser Ser Gln Leu Gly Phe Gly Val Leu Glu Leu Ser
165    170    175
Gln Ser Gln Asp Val Glu Glu Asn Thr Val Pro Tyr Glu Val Asp Lys
180    185    190
Glu Gln Leu Gln Ser Val Thr Thr Asn Ser Gly Tyr Thr Arg Leu Ser
195    200    205
Asp Val Asp Ala Asn Thr Ala Ile Lys His Glu Glu Gln Ser Asn Glu
210    215    220
Asp Ile Pro Ile Ala Glu Gln Ser Ser Lys Asp Ile Pro Val Thr Ala
225    230    235    240
Gln Pro Ser Lys Asp Val His Val Val Lys Glu Gln Asn Pro Pro Pro
245    250    255
Ala Arg Ser Glu Asp Met Pro Phe Ser Pro Lys Ala Ser Val Ala Ala
260    265    270
Met Glu Ala Lys Glu Gln Leu Ser Ala Gln Glu Leu Met Glu Ser Gly
275    280    285
Leu Gln Ile Gln Lys Ser Pro Glu Pro Glu Val Leu Ser Thr Gln Glu

```

290	295	300
Asp Leu Phe Asp Gln Ser Asn Lys Thr Val Ser Ser Asp Gly Cys Ser		
305	310	315
Thr Pro Ser Arg Glu Glu Gly Gly Cys Ser Leu Ala Ser Thr Pro Ala		
	325	330
Thr Thr Leu His Leu Leu Gln Leu Ser Gly Gln Arg Ser Leu Val Gln		
	340	345
Asp Ser Leu Ser Thr Asn Ser Ser Asp Leu Val Ala Pro Ser Pro Asp		
	355	360
Ala Phe Arg Ser Thr Pro Phe Ile Val Pro Ser Ser Pro Thr Glu Gln		
	370	375
Glu Gly Arg Gln Asp Lys Pro Met Asp Thr Ser Val Leu Ser Glu Glu		
385	390	395
Gly Gly Glu Pro Phe Gln Lys Lys Leu Gln Ser Gly Glu Pro Val Glu		
	405	410
Leu Glu Asn Pro Pro Leu Leu Pro Glu Ser Thr Val Ser Pro Gln Ala		
	420	425
Ser Thr Pro Ile Ser Gln Ser Thr Pro Val Phe Pro Pro Gly Ser Leu		
	435	440
Pro Ile Pro Ser Gln Pro Gln Phe Ser His Asp Ile Phe Ile Pro Ser		
	450	455
Pro Ser Leu Glu Glu Gln Ser Asn Asp Gly Lys Lys Asp Gly Asp Met		
465	470	475
His Ser Ser Ser Leu Thr Val Glu Cys Ser Lys Thr Ser Glu Ile Glu		
	485	490
Pro Lys Asn Ser Pro Glu Asp Leu Gly Leu Ser Leu Thr Gly Asp Ser		
	500	505
Cys Lys Leu Met Leu Ser Thr Ser Glu Tyr Ser Gln Ser Pro Lys Met		
	515	520
Glu Ser Leu Ser Ser His Arg Ile Asp Glu Asp Gly Glu Asn Thr Gln		
	530	535
Ile Glu Asp Thr Glu Pro Met Ser Pro Val Leu Asn Ser Lys Phe Val		
545	550	555
Pro Ala Glu Asn Asp Ser Ile Leu Met Asn Pro Ala Gln Asp Gly Glu		
	565	570
Val Gln Leu Ser Gln Asn Asp Asp Lys Thr Lys Gly Asp Asp Thr Asp		
	580	585
Thr Arg Asp Asp Ile Ser Ile Leu Ala Thr Gly Cys Lys Gly Arg Glu		
	595	600
Glu Thr Val Ala Glu Asp Val Cys Ile Asp Leu Thr Cys Asp Ser Gly		
	610	615
Ser Gln Ala Val Pro Ser Pro Ala Thr Arg Ser Glu Ala Leu Ser Ser		
625	630	635
Val Leu Asp Gln Glu Glu Ala Met Glu Ile Lys Glu His His Pro Glu		
	645	650
Glu Gly Ser Ser Gly Ser Glu Val Glu Glu Ile Pro Glu Thr Pro Cys		
	660	665
Glu Ser Gln Gly Glu Glu Leu Lys Glu Glu Asn Met Glu Ser Val Pro		
	675	680
Leu His Leu Ser Leu Thr Glu Thr Gln Ser Gln Gly Leu Cys Leu Gln		
	690	695
Lys Glu Met Pro Lys Lys Glu Cys Ser Glu Ala Met Glu Val Glu Thr		
705	710	715
Ser Val Ile Ser Ile Asp Ser Pro Gln Lys Leu Ala Ile Leu Asp Gln		
	725	730
Glu Leu Glu His Lys Glu Gln Glu Ala Trp Glu Glu Ala Thr Ser Glu		
	740	745
Asp Ser Ser Val Val Ile Val Asp Val Lys Glu Pro Ser Pro Arg Val		
	755	760
		765

Asp	Val	Ser	Cys	Glu	Pro	Leu	Glu	Gly	Val	Glu	Lys	Cys	Ser	Asp	Ser	770	775	780
Gln	Ser	Trp	Glu	Asp	Ile	Ala	Pro	Glu	Ile	Glu	Pro	Cys	Ala	Glu	Asn	785	790	795
Arg	Leu	Asp	Thr	Lys	Glu	Glu	Lys	Ser	Val	Glu	Tyr	Glu	Gly	Asp	Leu	805	810	815
Lys	Ser	Gly	Thr	Ala	Glu	Thr	Glu	Pro	Val	Glu	Gln	Asp	Ser	Ser	Gln	820	825	830
Pro	Ser	Leu	Pro	Leu	Val	Arg	Ala	Asp	Asp	Pro	Leu	Arg	Leu	Asp	Gln	835	840	845
Glu	Leu	Gln	Gln	Pro	Gln	Thr	Gln	Glu	Lys	Thr	Ser	Asn	Ser	Leu	Thr	850	855	860
Glu	Asp	Ser	Lys	Met	Ala	Asn	Ala	Lys	Gln	Leu	Ser	Ser	Asp	Ala	Glu	865	870	875
Ala	Gln	Lys	Leu	Gly	Lys	Pro	Ser	Ala	His	Ala	Ser	Gln	Ser	Phe	Cys	885	890	895
Glu	Ser	Ser	Ser	Glu	Thr	Pro	Phe	His	Phe	Thr	Leu	Pro	Lys	Glu	Gly	900	905	910
Asp	Ile	Ile	Pro	Pro	Leu	Thr	Gly	Ala	Thr	Pro	Pro	Leu	Ile	Gly	His	915	920	925
Leu	Lys	Leu	Glu	Pro	Lys	Arg	His	Ser	Thr	Pro	Ile	Gly	Ile	Ser	Asn	930	935	940
Tyr	Pro	Glu	Ser	Thr	Ile	Ala	Thr	Ser	Asp	Val	Met	Ser	Glu	Ser	Met	945	950	955
Val	Glu	Thr	His	Asp	Pro	Ile	Leu	Gly	Ser	Gly	Lys	Gly	Asp	Ser	Gly	965	970	975
Ala	Ala	Pro	Asp	Val	Asp	Asp	Lys	Leu	Cys	Leu	Arg	Met	Lys	Leu	Val	980	985	990
Ser	Pro	Glu	Thr	Glu	Ala	Ser	Glu	Glu	Ser	Leu	Gln	Phe	Asn	Leu	Glu	995	1000	1005
Lys	Pro	Ala	Thr	Gly	Glu	Arg	Lys	Asn	Gly	Ser	Thr	Ala	Val	Ala	Glu	1010	1015	1020
Ser	Val	Ala	Ser	Pro	Gln	Lys	Thr	Met	Ser	Val	Leu	Ser	Cys	Ile	Cys	1025	1030	1035
Glu	Ala	Arg	Gln	Glu	Asn	Glu	Ala	Arg	Ser	Glu	Asp	Pro	Pro	Thr	Thr	1045	1050	1055
Pro	Ile	Arg	Gly	Asn	Leu	Leu	His	Phe	Pro	Ser	Ser	Gln	Gly	Glu	Glu	1060	1065	1070
Glu	Lys	Glu	Lys	Leu	Glu	Gly	Asp	His	Thr	Ile	Arg	Gln	Ser	Gln	Gln	1075	1080	1085
Pro	Met	Lys	Pro	Ile	Ser	Pro	Val	Lys	Asp	Pro	Val	Ser	Pro	Ala	Ser	1090	1095	1100
Gln	Lys	Met	Val	Ile	Gln	Gly	Pro	Ser	Ser	Pro	Gln	Gly	Glu	Ala	Met	1105	1110	1115
Val	Thr	Asp	Val	Leu	Glu	Asp	Gln	Lys	Glu	Gly	Arg	Ser	Thr	Asn	Lys	1125	1130	1135
Glu	Asn	Pro	Ser	Lys	Ala	Leu	Ile	Glu	Arg	Pro	Ser	Gln	Asn	Asn	Ile	1140	1145	1150
Gly	Ile	Gln	Thr	Met	Glu	Cys	Ser	Leu	Arg	Val	Pro	Glu	Thr	Val	Ser	1155	1160	1165
Ala	Ala	Thr	Gln	Thr	Ile	Lys	Asn	Val	Cys	Glu	Gln	Gly	Thr	Ser	Thr	1170	1175	1180
Val	Asp	Gln	Asn	Phe	Gly	Lys	Gln	Asp	Ala	Thr	Val	Gln	Thr	Glu	Arg	1185	1190	1195
Gly	Ser	Gly	Glu	Lys	Pro	Val	Ser	Ala	Pro	Gly	Asp	Asp	Thr	Glu	Ser	1205	1210	1215
Leu	His	Ser	Gln	Gly	Glu	Glu	Glu	Phe	Asp	Met	Pro	Gln	Pro	Pro	His	1220	1225	1230
Gly	His	Val	Leu	His	Arg	His	Met	Arg	Thr	Ile	Arg	Glu	Val	Arg	Thr			

1235	1240	1245
Leu Val Thr Arg Val Ile Thr Asp Val Tyr Tyr Val Asp Gly Thr Glu		
1250	1255	1260
Val Glu Arg Lys Val Thr Glu Glu Thr Glu Glu Pro Ile Val Glu Cys		
1265	1270	1275
Gln Glu Cys Glu Thr Glu Val Ser Pro Ser Gln Thr Gly Gly Ser Ser		1280
	1285	1290
Gly Asp Leu Gly Asp Ile Ser Ser Phe Ser Ser Lys Ala Ser Ser Leu		1295
	1300	1305
His Arg Thr Ser Ser Gly Thr Ser Leu Ser Ala Met His Ser Ser Gly		1310
	1315	1320
Ser Ser Gly Lys Gly Ala Gly Pro Leu Arg Gly Lys Thr Ser Gly Thr		1325
	1330	1335
Glu Pro Ala Asp Phe Ala Leu Pro Ser Ser Arg Gly Gly Pro Gly Lys		1340
1345	1350	1355
Leu Ser Pro Arg Lys Gly Val Ser Gln Thr Gly Thr Pro Val Cys Glu		1360
	1365	1370
Glu Asp Gly Asp Ala Gly Leu Gly Ile Arg Gln Gly Gly Lys Ala Pro		1375
	1380	1385
Val Thr Pro Arg Gly Arg Gly Arg Arg Gly Arg Pro Pro Ser Arg Thr		1390
	1395	1400
Thr Gly Thr Arg Glu Thr Ala Val Pro Gly Pro Leu Gly Ile Glu Asp		1405
	1410	1415
Ile Ser Pro Asn Leu Ser Pro Asp Asp Lys Ser Phe Ser Arg Val Val		1420
1425	1430	1435
Pro Arg Val Pro Asp Ser Thr Arg Arg Thr Asp Val Gly Ala Gly Ala		1440
	1445	1450
Leu Arg Arg Ser Asp Ser Pro Glu Ile Pro Phe Gln Ala Ala Ala Gly		1455
	1460	1465
Pro Ser Asp Gly Leu Asp Ala Ser Ser Pro Gly Asn Ser Phe Val Gly		1470
	1475	1480
Leu Arg Val Val Ala Lys Trp Ser Ser Asn Gly Tyr Phe Tyr Ser Gly		1485
1490	1495	1500
Lys Ile Thr Arg Asp Val Gly Ala Gly Lys Tyr Lys Leu Leu Phe Asp		1505
1505	1510	1515
Asp Gly Tyr Glu Cys Asp Val Leu Gly Lys Asp Ile Leu Leu Cys Asp		1520
	1525	1530
Pro Ile Pro Leu Asp Thr Glu Val Thr Ala Leu Ser Glu Asp Glu Tyr		1535
	1540	1545
Phe Ser Ala Gly Val Val Lys Gly His Arg Lys Glu Ser Gly Glu Leu		1550
	1555	1560
Tyr Tyr Ser Ile Glu Lys Glu Gly Gln Arg Lys Trp Tyr Lys Arg Met		1565
1570	1575	1580
Ala Val Ile Leu Ser Leu Glu Gln Gly Asn Arg Leu Arg Glu Gln Tyr		1585
1585	1590	1595
Gly Leu Gly Pro Tyr Glu Ala Val Thr Pro Leu Thr Lys Ala Ala Asp		1600
	1605	1610
Ile Ser Leu Asp Asn Leu Val Glu Gly Lys Arg Lys Arg Arg Ser Asn		1615
	1620	1625
Val Ser Ser Pro Ala Thr Pro Thr Ala Ser Ser Ser Ser Ser Thr Thr		1630
	1635	1640
Pro Thr Arg Lys Ile Thr Glu Ser Pro Arg Ala Ser Met Gly Val Leu		1645
	1650	1655
Ser Gly Lys Arg Lys Leu Ile Thr Ser Glu Glu Glu Arg Ser Pro Ala		1660
1665	1670	1675
Lys Arg Gly Arg Lys Ser Ala Thr Val Lys Pro Gly Ala Val Gly Ala		1680
	1685	1690
Gly Glu Phe Val Ser Pro Cys Glu Ser Gly Asp Asn Thr Gly Glu Pro		1695
	1700	1705
		1710

Ser Ala Leu Glu Glu Gln Arg Gly Pro Leu Pro Leu Asn Lys Thr Leu
 1715 1720 1725
 Phe Leu Gly Tyr Ala Phe Leu Leu Thr Met Ala Thr Thr Ser Asp Lys
 1730 1735 1740
 Leu Ala Ser Arg Ser Lys Leu Pro Asp Gly Pro Thr Gly Ser Ser Glu
 1745 1750 1755 1760
 Glu Glu Glu Glu Phe Leu Glu Ile Pro Pro Phe Asn Lys Gln Tyr Thr
 1765 1770 1775
 Glu Ser Gln Leu Arg Ala Gly Ala Gly Tyr Ile Leu Glu Asp Phe Asn
 1780 1785 1790
 Glu Ala Gln Cys Asn Thr Ala Tyr Gln Cys Leu Leu Ile Ala Asp Gln
 1795 1800 1805
 His Cys Arg Thr Arg Lys Tyr Phe Leu Cys Leu Ala Ser Gly Ile Pro
 1810 1815 1820
 Cys Val Ser His Val Trp Val His Asp Ser Cys His Ala Asn Gln Leu
 1825 1830 1835 1840
 Gln Asn Tyr Arg Asn Tyr Leu Leu Pro Ala Gly Tyr Ser Leu Glu Glu
 1845 1850 1855
 Gln Arg Ile Leu Asp Trp Gln Pro Arg Glu Asn Pro Phe Gln Asn Leu
 1860 1865 1870
 Lys Val Leu Leu Val Ser Asp Gln Gln Gln Asn Phe Leu Glu Leu Trp
 1875 1880 1885
 Ser Glu Ile Leu Met Thr Gly Gly Ala Ala Ser Val Lys Gln His His
 1890 1895 1900
 Ser Ser Ala His Asn Lys Asp Ile Ala Leu Gly Val Phe Asp Val Val
 1905 1910 1915 1920
 Val Thr Asp Pro Ser Cys Pro Ala Ser Val Leu Lys Cys Ala Glu Ala
 1925 1930 1935
 Leu Gln Leu Pro Val Val Ser Gln Glu Trp Val Ile Gln Cys Leu Ile
 1940 1945 1950
 Val Gly Glu Arg Ile Gly Phe Lys Gln His Pro Lys Tyr Lys His Asp
 1955 1960 1965
 Tyr Val Ser His
 1970

<210> 92
 <211> 5919
 <212> RNA
 <213> Homo sapiens

<400> 92
 atggacccta ctggaagtca gttggattca gattttctctc agcaagatac tccttgcttg 60
 ataattgaag atttctcagcc tgaaagccag gttctagagg atgattctgg ttctcacttc 120
 agtatgctat ctgcacacct tcctaattctc cagacgcaca aagaaaatcc tgtgttgat 180
 gttgtgtcca atcctgaaca aacagctgga gaagaacgag gagacggtaa tagtgggttc 240
 aatgaacatt tgaaagaaaa caagggttgca gacctgtgg attcttctaa cttggacaca 300
 tgtggttcca tcagtcaggt cattgagcag ttacctcagc caaacaggac aagcagtgtt 360
 ctgggaatgt cagtggaatc tgctcctgct gtggaggaag agaagggaga agagttggaa 420
 cagaaggaga aagagaagga agaagatact tcaggcaata ctacacattc ccttggtgct 480
 gaagatactg cctcatcaca gttgggtttt ggggttctgg aactctccca gagccaggat 540
 gttgaggaaa atactgtgcc atatgaagtg gacaaagagc agctacaatc agtaaccacc 600
 aactctggtt ataccaggct gtctgatgtg gatgctaata ctgcaattaa gcatgaagaa 660
 cagtccaacg aagatatccc catagcagaa cagtccagca aggacatccc tgtgacagca 720
 cagcccagta aggatgtaca tgttgtaaaa gagcaaaatc caccacctgc aaggtcagag 780
 gacatgcctt ttagcccca agcatctgtt gctgctatgg aagcaaaaga acagttgtct 840
 gcacaagaac ttatggaaag tggactgcag attcagaagt caccagagcc tgaggttttg 900
 tcaactcagg aagacttggt tgaccagagc aataaaacag tatcttctga tgggtgctct 960
 actccttcaa gggaggaagg tgggtgttct ttggcttcca ctctgccac cactctgcat 1020

ctcctgcagc	tctctggtca	gaggteccct	gttcaggaca	gtctttccac	gaattcttca	1080
gatcttggtg	ctccttctcc	tgatgctttc	cgatctactc	cttttatcgt	tcctagcagt	1140
cccacagagc	aagaagggag	acaagataag	ccaatggaca	cgtcagtggt	atctgaagaa	1200
ggaggagagc	cttttcagaa	gaaacttcaa	agtggtgaac	cagtgagggt	agaaaacccc	1260
cctctcctgc	ctgagtcacc	tgtatcacca	caagcctcaa	caccaatata	tcagagcaca	1320
ccagtccttc	ctcctgggtc	acttccctat	ccatcccagc	ctcagttttc	tcagacattc	1380
tttattcctt	ccccagtcct	ggaagaacaa	tcaaatgatg	ggaagaaaga	tgagatatga	1440
catagtccat	ctttgacagt	tgagtgttct	aaaacttcag	agattgaacc	aaagaattcc	1500
cctgaggatc	ttgggctatc	tttgacaggg	gattcttgca	agttgatgct	ttctacaagt	1560
gaatatagtc	agtcccaaaa	gatggagagc	ttgagttctc	acagaattga	tgaagatgga	1620
gaaaacacac	agattgagga	tacggaaccc	atgtctccag	ttctcaattc	taaatttggt	1680
cctgctgaaa	atgatagtat	cctgatgaat	ccagcacagg	atggtgaagt	acaactgagt	1740
cagaatgatg	acaaaacaaa	gggagatgat	acagacacca	gggatgacat	tagtatttta	1800
gccactgggt	gcaagggcag	agaagaaacg	gtagcagaag	atgtttgtat	tgatctcact	1860
tgtgattcgg	ggagtcaggc	agttccgtca	ccagctactc	gatctgaggc	actttctagt	1920
gtgttagatc	aggaggaagc	tatggaaatt	aaagaacacc	atccagagga	ggggtcttca	1980
gggtctgagg	tggaagaaat	ccctgagaca	ccttgtgaaa	gtcaaggaga	ggaactcaaa	2040
gaagaaaata	tgagagtggt	tccgttgcac	ctttctctga	ctgaaactca	gtcccaaggg	2100
ttgtgtcttc	aaaaggaaat	gccccaaaaa	gaatgctcag	aagctatgga	agttgaaacc	2160
agtgtgatta	gtattgattc	ccctcaaaaag	ttggcaatac	ttgaccaaga	attggaacat	2220
aaggaaacag	aagcttggga	agaagctact	tcagaggact	ccagtggtgt	cattgtagat	2280
gtgaaagagc	catctcccag	agttgatggt	tcttgtgaac	ctttggaggg	agtgagagaag	2340
tgctcagatt	cccagtcagt	ggaggatatt	gctccagaaa	tagaaccatg	tgctgagaat	2400
agattagaca	ccaaggaaga	aaagagtgtg	gaatatgaag	gagatctgaa	atcagggact	2460
gcagaaacag	aacctgtaga	gcaagattct	tcacagcctt	ccttaccttt	agtgaagaca	2520
gatgatcctt	taagacttga	ccaggagtgt	cagcagcccc	aaactcagga	gaaaacaagt	2580
aattcattaa	cagaagactc	aaaaatggct	aatgcaaagc	agctaagctc	agatgcagag	2640
gcccagaagc	tggggaagcc	ctctgccccat	gcctcacaaa	gcttctgtga	aagttctagt	2700
gaaaccccat	ttcatttcac	tttgccctaaa	gaaggtgata	tcattcccacc	attgactggt	2760
gcaaccccac	ctcttatttg	gcacctaaaa	ttggagccca	agagacacag	tactcctatt	2820
ggtattagca	actatccaga	aagcaccata	gcaaccagtg	atgtcatgtc	tgaaagcatg	2880
gtggagaccc	atgatcccat	acttggggagt	ggaaaagggg	attctggggc	tgccccagac	2940
gtggatgata	aattatgtct	aagaatgaaa	ctggttagtc	ctgagactga	ggcgagtga	3000
gagtctttgc	agttcaacct	ggaaaagcct	gcaactgggt	aaagaaaaaa	tggtactact	3060
gctgttgctg	agtctgttgc	cagtccccag	aagaccatgt	ctgtgttgag	ctgtatctgt	3120
gaagccaggc	aagagaatga	ggctcgaagt	gaggatcccc	ccaccacacc	catcaggggg	3180
aacttgctcc	actttccaag	ttctcaagga	gaagaggaga	aagaaaaatt	ggaggggtgac	3240
catacaatca	ggcagagtca	acagcctatg	aagcccatta	gtcctgtcaa	ggaccctggt	3300
tctcctgctt	cccagaagat	ggtcatacaa	gggccatcca	gtcctcaagg	agaggcaatg	3360
gtgacagatg	tgctagaaga	ccagaaagaa	ggacggagta	ctaataagga	aaatcctagt	3420
aaggccttga	ttgaaaggcc	cagccaaaaa	aacataggaa	tccaaaccat	ggagtgttcc	3480
ttgaggggtc	cagaaactgt	ttcagcagca	accagacta	taaagaatgt	gtgtgagcag	3540
gggaccagta	cagtggacca	gaactttgga	aagcaagatg	ccacagttca	gactgagagg	3600
gggagtggtg	agaaaccagt	cagtgtctct	ggggatgata	cagagtcgct	ccatagccag	3660
ggagaagaag	agtttgatat	gcctcagcct	ccacatggcc	atgtcttaca	tcgtcacatg	3720
agaacaatcc	gggaagtacg	cacacttgct	actcgtgtca	ttacagatgt	gtattatgtg	3780
gatggaaacag	aagtagaaag	aaaagtaact	gaggagactg	aagagccaat	tgtagagtgt	3840
caggagtgtg	aaactgaagt	ttccccttca	cagactgggg	gctcctcagg	tgacctgggg	3900
gatatcagct	ccttctcctc	caaggcatcc	agcttacacc	gcacatcaag	tgggacaagt	3960
ctctcagcta	tgacacagcag	tggaagctca	gggaaaggag	ccggaccact	cagagggaaa	4020
accagcgggg	cagaacccgc	agattttgcc	ttaccagct	cccaggagg	cccaggaaaa	4080
ctgagtccta	gaaaaggggg	cagtccagaca	gggacgccag	tgtgtgagga	ggatgggtgat	4140
gcaggccttg	gcacacagaca	gggaggggaag	gctccagtc	cgcctcgtgg	gcgtgggcca	4200
aggggcccgc	caccttctcg	gaccttgga	accagagaaa	cagctgtgcc	tgggcccttg	4260
ggcatagagg	acatttcacc	taacttgctca	ccagatgata	aatccttcag	ccgtgtcgtg	4320
ccccgagtgc	cagactccac	cagacgaaca	gatgtgggtg	ctggtgcttt	gcgtcgtagt	4380
gactctccag	aaattccttt	ccaggtctgt	gctggccctt	ctgatggctt	agatgcctcc	4440
tctccaggaa	atagctttgt	agggctccgt	gttgtagcca	agtggtcac	caatggctac	4500
ttttactctg	ggaaaatcac	acgagatgtc	ggagctggga	agtataaatt	gctctttgat	4560

gatgggtacg	aatgtgatgt	gttgggcaaa	gacattctgt	tatgtgaccc	catcccgctg	4620
gacactgaag	tgacggccct	ctcggaggat	gagtatttca	gtgcaggagt	ggtgaaagga	4680
cataggaagg	agtctgggga	actgtactac	agcattgaaa	aagaaggcca	aagaaagtgg	4740
tataagcgaa	tggctgtcat	cctgtccttg	gagcaaggaa	acagactgag	agagcagtat	4800
gggcttggcc	cctatgaagc	agtaacacct	cttacaaaag	cagcagatat	cagcttagac	4860
aatttggtgg	aagggaagcg	gaaacggcgc	agtaacgtca	gctccccagc	caccctact	4920
gcctccagta	gcagcagcac	aaccctacc	cgaaagatca	cagaaagtcc	tcgtgcctcc	4980
atgggagttc	tctcaggcaa	aagaaaactt	atcacttctg	aagaggaacg	gtcccctgcc	5040
aagcgaggtc	gcaagtctgc	cacagtaaaa	cctggtgcag	taggggcagg	agagtttgtg	5100
agcccctgtg	agagtggaga	caacaccggg	gaaccctctg	ccctggaaga	gcagagaggg	5160
cctttgcctc	tcaacaagac	cttgtttctg	ggctacgcat	ttctccttac	catggccaca	5220
accagtgaac	agttggccag	cgcctccaaa	ctgccagatg	gtcctacagg	aagcagtga	5280
gaagaggagg	aatttttggg	aattcctcct	ttcaacaagc	agtatacaga	atcccagctt	5340
cgagcaggag	ctggctatat	ccttgaagat	ttcaatgaag	cccagtgtaa	cacagcttac	5400
cagtgtcttc	taattgcgga	tcagcattgt	cgaaccggga	agtacttctt	gtgccttgcc	5460
agtgggattc	cttgtgtgtc	tcattgtctg	gtccatgata	gttgccatgc	caaccagctc	5520
cagaactacc	gtaattatct	gttgccagct	gggtacagcc	ttgaggagca	aagaattctg	5580
gactggcaac	cccgtgaaaa	tcctttccag	aatctgaagg	tactcttggt	atcagaccaa	5640
cagcagaact	tcctggagct	ctggtctgag	atcctcatga	ctggtggtgc	agcctctgtg	5700
aagcagcacc	attcaagtgc	ccataacaaa	gatattgctt	taggggtatt	tgatgtggtg	5760
gtgacggacc	cctcatgccc	agcctcggtg	ctgaagtgtg	ctgaagcatt	gcagctgcct	5820
gtggtgtcac	aagagtgggt	gatccagtgc	ctcattgttg	gggagagaat	tggattcaag	5880
cagcatccaa	aatataaaca	cgattatgtt	tctcactaa			5919

<210> 93
 <211> 2274
 <212> DNA
 <213> Homo sapiens

<400> 93						
atggctgctg	gacaaaacct	ccaaagtctt	gaaagatcag	aaatgatagc	tacctggagt	60
ccagctgtac	ggacactgag	gaatattact	aataatgctg	acattcagca	gatgaaccgg	120
ccatcaaatg	tagcacatat	cttacagact	ctttcagcac	ctacgaaaaa	tttagaacag	180
caggtgaatc	acagccagca	gggacatata	aatgccaatg	cagtgtgtgt	tagccaagtg	240
aaagtgactc	cagagacaca	catgtctacg	cagcagcagc	aggcccagca	gcagcagcag	300
cagcaccggg	ttttacacct	tcagccccag	cagataatgc	agctccagca	gcagcagcag	360
cagcagatct	ctcagcaacc	ttacccccag	cagccgcgcg	atccattttc	acagcaacag	420
cagcagcagc	agcaagccca	tcgcctcag	ttttcacagc	aacagctaca	gtttccacag	480
caacagttgc	atcctccaca	gcagctgcag	cgccctcagc	agcagctcca	gccctttcag	540
cagcagcatg	ccctgcagca	gcagttccat	cagctgcagc	agcaccagct	ccagcagcag	600
cagctcgccc	agctccagca	gcagcacagc	ctgctccagc	agcagcagca	acagcagatt	660
cagcagcagc	agctccagcg	catgcaccag	cagcagcagc	agcagcagat	gcaaagtcag	720
acagcgccac	acttgagtca	gacgtcacag	gcgctgcagc	atcaggttcc	acctcagcag	780
cccccgcagc	agcagcagca	acagcagcca	ccaccatcgc	ctcagcagca	tcagcttttt	840
ggacatgatc	cagcagtggg	gattccagaa	gaaggcttct	tattgggatg	tgtgtttgca	900
attgcggtat	atccagagca	gatgtctgat	aagcaactgc	tggccacctg	gaaaaggata	960
atccaggcac	atggcggcac	tgttgacccc	accttcacga	gtcgatgcac	gcaccttctc	1020
tgtgagagtc	aagtcagcag	cggtatgca	caggcaataa	gagaaagaaa	gagatgtgtt	1080
actgcacact	ggttaaaccac	agtcttaaa	aagaagaaaa	tggtaaccgc	gcaccgagcc	1140
cttcaacttc	cagtggcctt	cccaccagga	ggaaagccat	gttcacagca	tattatttct	1200
gtgactggat	ttgttgatag	tgacagagat	gacctaaaat	taatggctta	tttggcaggt	1260
gccaaatata	cgggttatct	atgcgcgagc	aacacagtcc	tcatctgtaa	agaaccaact	1320
ggtttaaagt	atgaaaaagc	caaagagtgg	aggataccct	gtgtcaacgc	ccagtggctt	1380
ggcgacattc	ttctgggaaa	ctttgaggca	ctgaggcaga	ttcagtatag	tcgctacacg	1440
gcattcagtc	tcgaggatcc	atttgcccc	acccagcatt	tagtttttaa	tcttttagat	1500
gcttgagag	ttcccttaaa	agtgtctgca	gagttgttga	tgagtataag	actacctccc	1560
aaactgaaac	agaatgaagt	agctaattgtc	cagccttctt	ccaaaagagc	cagaattgaa	1620

gacgtaccac	ctcccactaa	aaagctaact	ccagaattga	ccccctttgt	gcttttctact	1680
ggattcgagc	ctgtccaggt	tcaacagtat	attaagaagc	tctacattct	tggtggagag	1740
gttgcgaggt	ctgcacagaa	gtgcacacac	ctcattgcc	gcaaagtgac	tcgcaccgtg	1800
aagtccctga	cggcgatttc	tgctgtgaag	cacatagtga	cgccagagtg	gctggaagaa	1860
tgcttcaggt	gtcagaagtt	cattgatgag	cagaactaca	ttctccgaga	tgctgaggca	1920
gaagtacttt	tctcttttcag	cttgaagaa	tccttaaaac	gggcacacgt	ttctccactc	1980
tttaaggcaa	aatattttta	catcacacct	ggaatctgcc	caagtctttc	cactatgaag	2040
gcaatcgtag	agtgtgcagg	aggaaaaggtg	ttatccaagc	agccatcttt	ccggaagctc	2100
atggagcaca	agcagaactc	gagtttgtcg	gaaataattt	taatatactg	tgaaaatgac	2160
cttcatttat	gccgagaata	ttttgccaga	ggcatagatg	ttcacaatgc	agagttcgtt	2220
ctgactggag	tgctcactca	aacgctggac	tatgaatcat	ataagtttaa	ctga	2274

<210> 94
 <211> 3930
 <212> DNA
 <213> Homo sapiens

<400> 94						
atgtcaggcc	agttagtcca	atggaaaagc	tctccagatc	gagtcaccca	aagcgctata	60
aaggaaacac	tgcattctcc	cttggctgat	ggcgacatga	acgaaatgaa	tgttcccgtt	120
gatccggttg	aaaacaagg	aaatagcaca	aacataatcg	aaggaagtcc	caaagcaaat	180
ccaaatcctg	tcaagtttat	gaatacaagt	gagatatttc	aaaaatctct	gggattactt	240
gacgagagtc	caagacatga	tgatgagtta	aatattgaag	taggagataa	tgatcgacca	300
aatgctaaca	tattgcataa	tgaaaggact	cctgaccttg	accgaattgc	taactttttc	360
aaaagcaatc	gaacccctgg	taaagaaaat	cttttgacca	aatatcaaag	ctccgatctg	420
gaagacactc	ctctgatgtt	aagaaaaaaa	atgacttttc	aaactccaac	tgatccattg	480
gaacagaaaa	ccttcaaaaa	gttgaagtca	gatactgggt	tttgctatta	tgagagcgag	540
aatgatggag	aagaaaatgc	gtcattagaa	gttacagagg	cggatgccac	ttttgtacag	600
atggctgaac	gttctgctga	taattatgac	tgtgcattgg	aaggaattgt	tacacctaaa	660
agatataaag	acgaattaag	taaaagtgg	ggaatgcaag	atgaacgagt	tcaaaaaact	720
caaatcatga	tatcagcaga	atcaccta	tcgataagct	cttatgacaa	gaacaaaatt	780
accgggaatg	gccggaccac	aagaaatgta	aacaaggttt	ttaacaataa	cgaagataac	840
ataggagcta	tcgaggaaaa	aaatccagta	aaaaagaaaa	gtgagaacta	ttcatcagat	900
gatctcagag	aacggaacaa	tcaaataata	caaagtaatg	aatcagagga	gattaacgaa	960
ttggaaaaaga	atctgaatgt	ttcgggtaga	gagaatgacg	tgaacaattt	agatatcgat	1020
attaatagtg	ctgtgtctgg	caccccttca	cgcaacaatg	cggagaaga	aatgtattcc	1080
agtgaagtg	taaacaatcg	ggaaccatcc	aagaagtgg	tattccgata	ctcaaaagac	1140
aaaacggaaa	ataatagcaa	tagatctacg	caaatagtca	ataatccaag	aacacaggaa	1200
atgccttttag	atagtatttc	aatcgatacg	caacccttat	ctaaaagttt	caataccgaa	1260
acaaataatg	aattagagac	acagataatt	gtttcatcgc	tttcccaagg	catatctgct	1320
cagaaggagc	ctgtttttca	tctactggc	cagacagaag	aaataaaaaa	ccaaataata	1380
aattctcctg	aacaaaatgc	tttgaatgca	acctttgaaa	ctcccgttac	tctttctcgg	1440
attaattttg	aacccatatt	ggaagttcct	gagactagtt	caccatctaa	gaatacgatg	1500
tcaaaaccct	cgaattcttc	acctattccg	aaggaaaaag	atacatttaa	tatacacgag	1560
agagaagtag	agacaaacaa	tgttttttca	aacgatatac	aaaattcttc	aaatgcagct	1620
accagagatg	acattatcat	agccgggttca	tctgatttca	acgaacaaaa	ggaaataacc	1680
gatagaatat	acttacaact	ttcaggaaaag	caaataatctg	attcaggaag	tgatgaaaca	1740
gaacgtatgt	ccccaaatga	gcttgatacg	aaaaaggaaa	gtacaatcat	gagcgagggt	1800
gaactaacc	aagaactgcc	tgaagttgaa	gagcagcaag	atcttcaaac	gtctccaaaa	1860
aagctggtag	tcgagggaaga	aactttaatg	gagataaaaa	aaagcaagg	gaactcactt	1920
cagcttcacg	atgataataa	agaatgcaat	tcagataaac	aagatggcac	agagtctttg	1980
gatgtagctt	tgattgaaca	cgaaagcaaa	ggacagagct	cagaacttca	gaaaaacctc	2040
atgcaattat	ttccaagtga	gtcacaggag	attattcaga	accgaagaac	aataaagcga	2100
cgtcaaaaag	atacaataga	gatcgggtgaa	gaggaggaga	acagaagcac	taagacatca	2160
ccgacaaaac	acctcaaaaag	aaattcagat	ttggatgctg	cttctatcaa	aagggaaccg	2220
tcttgacgca	ttaccataca	aacaggggag	acaggttcgg	gcaaagactc	taaagaacag	2280
tcttacgtgt	ttcctgaagg	tattagaacg	gcagataata	gtttcttatc	gaaagacgac	2340
ataatttttg	gaaatgcggt	atggtgtcag	tatacgtgga	attacaaatt	ttatccgggt	2400
attttattgg	aagttgacac	taatcaagat	ggctgttgga	tttatttcga	aacaggaaga	2460

tcgctaacca	aagatgagga	catctactac	ttagatatta	gaatagggga	tgctgttacc	2520
tttgatggaa	atgagtacgt	agtcgttggg	ctagaatgtc	gtagccatga	tctcaacata	2580
ataagatgta	ttcgaggata	tgatacgggt	catttgaaaa	aaaaaaatgc	aagcggattg	2640
ttggggaaaa	ggacgttaat	taaagcacta	agctcgatca	gtcttgacct	aagcgaagtg	2700
gctaaaagag	cgaagatcat	attagaagat	aatgagaaaa	ataaaggcga	cgcgtatagg	2760
tacttgagac	atcccattag	gggaaggaaa	tcaatgacca	atgttctgtc	tccgaagaaa	2820
catactgatg	acgaaaagga	cataaatacg	catactgaag	tgtacaataa	cgaaatagaa	2880
tcgagctccg	aaaagaagga	aattgttaaa	aaggattcta	gagacgcatt	agctgaacat	2940
gcaggagcgc	caagcctgct	tttttcttct	ggtgaaatca	gaacagggaa	tgtatttgat	3000
aaatgtatgt	ttgttttgac	aagcctattc	gaaaatagag	aggaacttcg	acagaccatt	3060
gaatcgcaag	gcggcactgt	aattgagtca	ggattttcca	ctttatttaa	cttcactcat	3120
ccgctagcta	aatcttttagt	caataaaggt	aatacagata	atattcgaga	attggccttg	3180
aagctagcct	ggaaacctca	ttccctatgt	gcgactgca	gatttgcttg	cctaatacaca	3240
aaacggcatt	taagaagctt	aaagtactta	gaaacttttg	cgttgggggtg	gcctacacta	3300
cactggaaat	tcataagtgc	atgcattgaa	aagaaaagaa	tagtaccaca	tttaatatata	3360
caatacctat	taccttcggg	tgaaagtttt	cggttatcgt	tagattctcc	atcaaaggga	3420
ggaatcatta	aatccaacaa	tattttttca	ttttatacac	aattcttacg	cggatctaata	3480
ttaagagatc	agatatgtgg	agtgaagaaa	atgttaaagt	actacattgt	tattgttttg	3540
ggtagatctg	agttggacag	ttttgtcaaa	tttgcttttg	catgtttgag	cgcaggtaga	3600
atgcttaca	ttgattttacc	caatattgat	gtagatgata	cagagccatt	gttaaattgcc	3660
ttagattctt	tagtaccacg	aataggatca	gaattatcta	atcgaaagtt	aaagtttctc	3720
atatatgcta	acgaaaataa	tggtaaatct	cagatgaagc	ttctcgaaag	attgagaagt	3780
caaatatcac	tgaaatttaa	gaaatttaac	tacatatttc	acactgaatc	taaagaatgg	3840
ctaattcaga	caataattaa	cgaggacact	ggttttcacg	atgatattac	ggacaatgat	3900
atatacaaca	ctatttctga	ggttagatga				3930

<210> 95
 <211> 5592
 <212> DNA
 <213> Homo sapiens

<400> 95						
atggatttat	ctgctcttcg	cgttgaagaa	gtacaaaatg	tcattaatgc	tatgcagaaa	60
atcttagagt	gtcccatctg	tctggagttg	atcaaggaac	ctgtctccac	aaagtgtgac	120
cacatatatt	gcaaattttg	catgctgaaa	cttctcaacc	agaagaaagg	gccttcacag	180
tgtcctttat	gtaagaatga	tataaccaa	aggagcctac	aagaaagtac	gagatttagt	240
caacttggtg	aagagctatt	gaaaatcatt	tgtgcttttc	agcttgacac	aggtttgag	300
tatgcaaaaa	gctataatgt	tgcaaaaaag	gaaaataact	ctcctgaaca	tctaaaagat	360
gaagtttcta	tcatccaaag	tatgggctac	agaaaccgtg	ccaaaagact	tctacagagt	420
gaacccgaaa	atccttccct	gcaggaaacc	agtctcagtg	tccaactctc	taaccttgga	480
actgtgagaa	ctctgaggac	aaagcagcgg	atacaacctc	aaaagacgtc	tgtctacatt	540
gaattgggat	ctgattcttc	tgaagatacc	gttaataagg	caacttattg	cagtgtggga	600
gatcaagaat	tgttacaaat	caccctcaa	ggaaccaggg	atgaaatcag	tttggtattc	660
gcaaaaaagg	ctgcttgatg	atcttctgag	acggatgtaa	caaatactga	acatcatcaa	720
cccagtaata	atgatttgaa	caccactgag	aagcgtgcag	ctgagaggca	tccagaaaag	780
tatcagggta	gttctgtttc	aaacttgcat	gtggagccat	gtggcacaaa	tactcatgcc	840
agctcattac	agcatgagaa	cagcagttta	ttactcacta	aagacagaa	gaatgtagaa	900
aaggctgaat	tctgtaataa	aagcaaacag	cctggccttag	caaggagcca	acataacaga	960
tgggctggaa	gtaaggaaac	atgtaatgat	aggcggactc	ccagcacaga	aaaaaaggta	1020
gatctgaatg	ctgatccctc	gtgtgagaga	aaagaatgga	ataagcagaa	actgccatgc	1080
tcagagaatc	ctagagatac	tgaagatgtt	ccttggtata	cactaaatag	cagcattcag	1140
aaagttaatg	agtgtgtttc	cagaagtgat	gaactgttag	gttctgatga	ctcacatgat	1200
ggggagtctg	aatcaaatgc	caaagtagct	gatgtattgg	acgttctaaa	tgaggtagat	1260
gaatattctg	gttcttcaga	gaaaatagac	ttactggcca	gtgatcctca	tgaggcttta	1320
atatgtaaaa	gtgaaagagt	tactccaaa	tcagtagaga	gtaatatattg	agacaaaata	1380
tttgggaaaa	cctatcggaa	gaaggcaagc	ctccccaact	taagccatgt	aactgaaaat	1440
ctaattatag	gagcatttgt	tactgagcca	cagataatac	aagagcgtcc	cctcacaat	1500
aaattaaagc	gtaaaaggag	acctacatca	ggccttcac	ctgaggattt	tatcaagaaa	1560
gcagatttgg	cagttcaaaa	gactcctgaa	atgataaatc	agggaactaa	ccaaacggag	1620

cagaatggtc	aagtgatgaa	tattactaat	agtggtcatg	agaataaaac	aaaaggtgat	1680
tctattcaga	atgagaaaaa	tcctaaccac	atagaatcac	tcgaaaaaga	atctgctttc	1740
aaaacgaaag	ctgaacctat	aagcagcagt	ataagcaata	tggaactcga	attaaatatc	1800
cacaattcaa	aagcacctaa	aaagaatagg	ctgaggagga	agtcttctac	caggcatatt	1860
catgcgcttg	aactagtagt	cagtagaaat	ctaagcccac	ctaattgtac	tgaattgcaa	1920
attgatagtt	gttctagcag	tgaagagata	aagaaaaaaa	agtacaacca	aatgccagtc	1980
aggcacagca	gaaacctaca	actcatggaa	ggtaaagaac	ctgcaactgg	agccaagaag	2040
agtaacaagc	caaatgaaca	gacaagtaaa	agacatgaca	gcgatacttt	cccagagctg	2100
aagttaacaa	atgcacctgg	ttcttttact	aagtgttcaa	ataccagtga	acttaaagaa	2160
tttgtcaatc	ctagccttcc	aagagaagaa	aaagaagaga	aactagaaac	agttaaagtg	2220
tctaataatg	ctgaagaccc	caaagatctc	atgttaagtg	gagaaagggg	tttgcaaact	2280
gaaagatctg	tagagagtag	cagtatttca	ttggtacctg	gtactgatta	tggcactcag	2340
gaaagtatct	cgttactgga	agttagcact	ctaggggaagg	caaaaacaga	accaaataaa	2400
tgtgtgagtc	agtgtgcagc	atttgaaaaa	cccaagggac	taattcatgg	ttgttccaaa	2460
gataatagaa	atgacacaga	aggctttaag	tatccattgg	gacatgaagt	taaccacagt	2520
cgggaacaa	gcatagaaat	ggaagaaagt	gaacttgatg	ctcagtattt	gcagaatata	2580
ttcaagggttt	caaagcgcca	gtcatttgct	ccgttttcaa	atccaggaaa	tgcagaagag	2640
gaatgtgcaa	catttctctgc	ccactctggg	tccttaaaga	aacaaagtcc	aaaagtcact	2700
tttgaatgtg	aacaaaagga	agaaaatcaa	ggaaagaatg	agtctaatat	caagcctgta	2760
cagacagtta	atatcactgc	aggctttcct	gtgggtgggc	agaaagataa	gccagttgat	2820
aatgccaaat	gtagtatcaa	aggaggctct	aggttttgtc	tatcatctca	gttcagaggc	2880
aacgaaactg	gactcattac	tccaaataaa	catggacttt	tacaaaaccc	atatcgtata	2940
ccaccacttt	ttcccatcaa	gtcatttggt	aaaactaaat	gtaagaaaaa	tctgctagag	3000
gaaaactttg	aggaacattc	aatgtcacct	gaaagagaaa	tgggaaatga	gaacattcca	3060
agtacagtga	gcacaattag	ccgtaataac	attagagaaa	atgtttttta	agaagccagc	3120
tcaagcaata	ttaatgaagt	aggttccagt	actaatgaag	tgggctccag	tattaatgaa	3180
ataggttcca	gtgatgaaaa	cattcaagca	gaactaggta	gaaacagagg	gccaaaattg	3240
aatgctatgc	ttagattagg	ggttttgcaa	cctgagggtc	ataaacaag	tcttctctgga	3300
agtaattgta	agcatcctga	aataaaaaag	caagaatatg	aagaagtagt	tcagactggt	3360
aatacagatt	tctctccata	tctgatttca	gataaacttag	aacagcctat	gggaagtagt	3420
catgcatctc	aggtttggtc	tgagacacct	gatgacctgt	tagatgatgg	tgaaataaag	3480
gaagatacta	gttttgctga	aaatgacatt	aaggaaagtt	ctgctgtttt	tagcaaaagc	3540
gtccagaag	gagagcttag	caggagtcct	agccctttca	cccatacaca	tttggtctag	3600
ggttaccgaa	gaggggcca	gaaattagag	tcctcagaag	agaacttatc	tagtgaggat	3660
gaagagcttc	cctgcttcca	acacttggtt	tttggtaaag	taaacaatat	accttctcag	3720
tctactaggc	atagcacctg	tgctaccgag	tgtctgtcta	agaacacaga	ggagaattta	3780
ttatcattga	agaatagctt	aatgactgc	agtaaccagg	taatattggc	aaaggcatct	3840
caggaacatc	accttagtga	ggaaacaaaa	tgttctgcta	gcttggtttc	ttcacagtgc	3900
agtgaattgg	aagacttgac	tgcaaatata	aacacccagg	atcctttctt	gatttggtct	3960
tccaaacaaa	tgaggcatca	gtctgaaagc	cagggagttg	gtctgagtga	caaggaattg	4020
gtttcagatg	atgaagaag	aggaacgggc	tttggaagaa	ataatcaaga	agagcaaagc	4080
atggattcaa	acttaggtga	agcagcatct	gtgtgtgaga	gtgaaacaag	cgtctctgaa	4140
gactgctcag	ggctatcctc	tcagagtgc	attttaacca	ctcagcagag	ggataccatg	4200
caacataacc	tgataaagct	ccagcaggaa	atggctgaac	tagaagctgt	gttagaacag	4260
catgggagcc	agccttctaa	cagctaccct	tccatcataa	gtgactcttc	tgcccttgag	4320
gacctgcgaa	atccagaaca	aagcacatca	gaaaaagcag	tattaacttc	acagaaaagt	4380
agtgaatacc	ctataagcca	gaatccagaa	ggcctttctg	ctgacaagtt	tgagggtgct	4440
gcagatagtt	ctaccagtaa	aaataaagaa	ccaggagtgg	aaaggtcac	cccttctaaa	4500
tgcccatcat	tagatgatag	gtggtacatg	cacagttgct	ctgggagtct	tcagaataga	4560
aactacccat	ctcaagagga	gctcattaag	gttgttgatg	tggaggagca	acagctggaa	4620
gagtctgggc	cacacgattt	gacggaaaca	tcttacttgc	caaggcaaga	tctagagga	4680
acccttacc	tggaatctgg	aatcagcctc	ttctctgatg	accctgaatc	tgatccttct	4740
gaagacagag	ccccagagtc	agctcgtggt	ggcaacatac	catcttcaac	ctctgcattg	4800
aaagttcccc	aattgaaagt	tgagaatct	gccagagtc	cagctgctgc	tcatactact	4860
gatactgctg	ggtataatgc	aatggaagaa	agtgtgagca	gggagaagcc	agaattgaca	4920
gcttcaacag	aaagggtaaa	caaaagaatg	tccatgggtg	tgtctggcct	gacccagaa	4980
gaatttatgc	tcgtgtacaa	gtttgccaga	aaacaccaca	tcactttaac	taatctaatt	5040
actgaagaga	ctactcatgt	tgttatgaaa	acagatgctg	agtttgtgtg	tgaacggaca	5100
ctgaaatatt	ttctaggaat	tgcgggagga	aaatgggtag	ttagctattt	ctgggtgacc	5160

cagtctatta	aagaaagaaa	aatgctgaat	gagcatgatt	ttgaagtcag	aggagatgtg	5220
gtcaatggaa	gaaaccacca	aggtccaaag	cgagcaagag	aatcccagga	cagaaagatc	5280
ttcagggggc	tagaaatctg	ttgctatggg	cccttcacca	acatgcccac	agatcaactg	5340
gaatggatgg	tacagctgtg	tgggtgcttct	gtggtgaagg	agctttcatc	attcaccctt	5400
ggcacagggtg	tccacccaat	tgtggttgtg	cagccagatg	cctggacaga	ggacaatggc	5460
ttccatgcaa	ttgggcagat	gtgtgaggca	cctgtggtga	cccgagagtg	ggtgttggac	5520
agtgtagcac	tctaccagtg	ccaggagctg	gacacctacc	tgatacccca	gatccccac	5580
agccactact	ga					5592